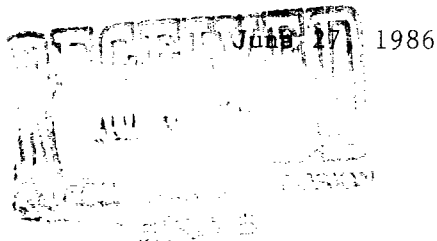




STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

TONEY ANAYA
GOVERNOR



POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P.O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

RE: APPLICATION FOR PRESSURE LIMIT INCREASE FOR DISPOSAL & INJECTION WELLS

Gentlemen:

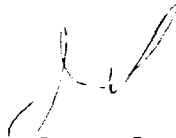
I have examined the step rate test for the:

Mobil Prod. TX & N.M. Inc.	N. Vacuum Abo Unit 210-L	23-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

OK

Very truly yours


Jerry Sexton
Supervisor, District I

/bp



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

June 27, 1986

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P.O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

RE: APPLICATION FOR PRESSURE LIMIT INCREASE FOR DISPOSAL & INJECTION WELLS

Gentlemen:

I have examined the step rate test for the:

Mobil Prod. TX & N.M. Inc.	North Vacuum Abo Unit #98-J	26-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

OK
Very truly yours


Jerry Sexton
Supervisor, District I

/bp



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

November 17, 1986

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE NEW MEXICO 87501
(505) 827-5800

Mobil Producing Texas &
New Mexico, Inc.
P. O. Box 633
Midland, Texas 79702

Attn: M. E. Sweeney

Re: Injection Pressure Increase
North Vacuum Abo Unit
Lea County, New Mexico

Dear Sir:

Reference is made to your request of October 16, 1986 to increase the surface injection pressure on five wells within the North Vacuum Abo Unit. This request is based on step rate tests conducted on the wells during September and October, 1986. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase your surface injection pressure on the following wells:

<u>Well & Location</u>	<u>Maximum Injection Surface Pressure</u>
NVAU Well No. 156 1893 FSL & 1800 FEL Unit J, Section 23	2485 PSIG
NVAU Well No. 203 660 FNL & 1780 FEL Unit B, Section 22	2205 PSIG
NVAU Well No. 209 1980 FSL & 1780 FEL Unit J, Section 22	2771 PSIG
NVAU Well No. 211 2054 FSL & 2162 FEL Unit J, Section 24	2998 PSIG

NVAU Well No. 302
1980 FSL & 1980 FEL
Unit J, Section 3

3108 PSIG

All located in Township 17 South, Range 34 East, NMPM,
Lea County, New Mexico.

The Division Director may rescind this injection
pressure increase if it becomes apparent that the injected
water is not being confined to the injection zone or it is
endangering any fresh water aquifers.

Sincerely,

A handwritten signature in dark ink, appearing to read 'R. L. Stamets', with a long horizontal flourish extending to the right.

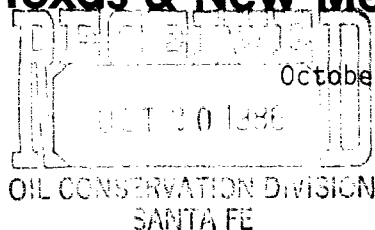
R. L. STAMETS
Director

RLS/DRC/et

cc: Oil Conservation Division - Hobbs
D. McDonald
D. Catanach
PMX-140
PMX-138
WFX-557

Mobil Producing Texas & New Mexico Inc.

State of New Mexico
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501



October 16, 1986

P. O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

Attention: R. L. Stamets

MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WATER INJECTION WELLS NO. 156,
203, 209, 211 & 302
NORTH VACUUM ABO FIELD
T-17-S, R-34-E,
LEA COUNTY, NEW MEXICO

Gentlemen:

Under the provisions of Order Nos. WFX-557, dated February 11, 1985; PMX-138, dated November 12, 1985; and PMX-140, dated March 7, 1986, Mobil Producing Texas & New Mexico, Inc. (MPTM) was granted permission to inject water into the Abo formation for the subject wells. The orders limited the pressure on the injection wells to no more than 0.2 psi per foot to the uppermost injection interval. MPTM has completed step-rate tests for these wells which show that higher pressure will not result in migration of the injected fluid from the Abo formation. MPTM therefore requests an increase in the injection pressure as follows:

	<u>Injection Interval</u>	<u>Present Surface Inj. Pressure Limit</u>	<u>Requested Surface Inj. Pressure Limit</u>
Well No. 156 1893' FSL & 1800' FEL Sec 23, (Unit J) Order No. PMX-138	8487-8548'	1697 psig.	2485 psig.
Well No. 203 660' FNL & 1780' FEL, Sec. 22, (Unit B) Order No. WFX-557	8692-8764'	1738 psig	2205 psig
Well No. 209 1980' FSL & 1780' FEL Sec. 22, (Unit J) Order No. WFX-557	8654-8718'	1731 psig	2771 psig

	<u>Injection Interval</u>	<u>Present Surface Inj. Pressure Limit</u>	<u>Requested Surface Inj. Pressure Limit</u>
Well No. 211 2054' FSL & 2162' FEL Sec 24, (Unit J) Order No. PMX-138	8475-8509'	1695 psig.	2998 Psig.
Well No. 302 1980' FSL & 1980' FEL, Sec. 3, (Unit J) Order No. PMX-140	8657-8759'	1731 psig.	3108 psig.

Enclosed are copies of the step rate tests.

Yours very truly,



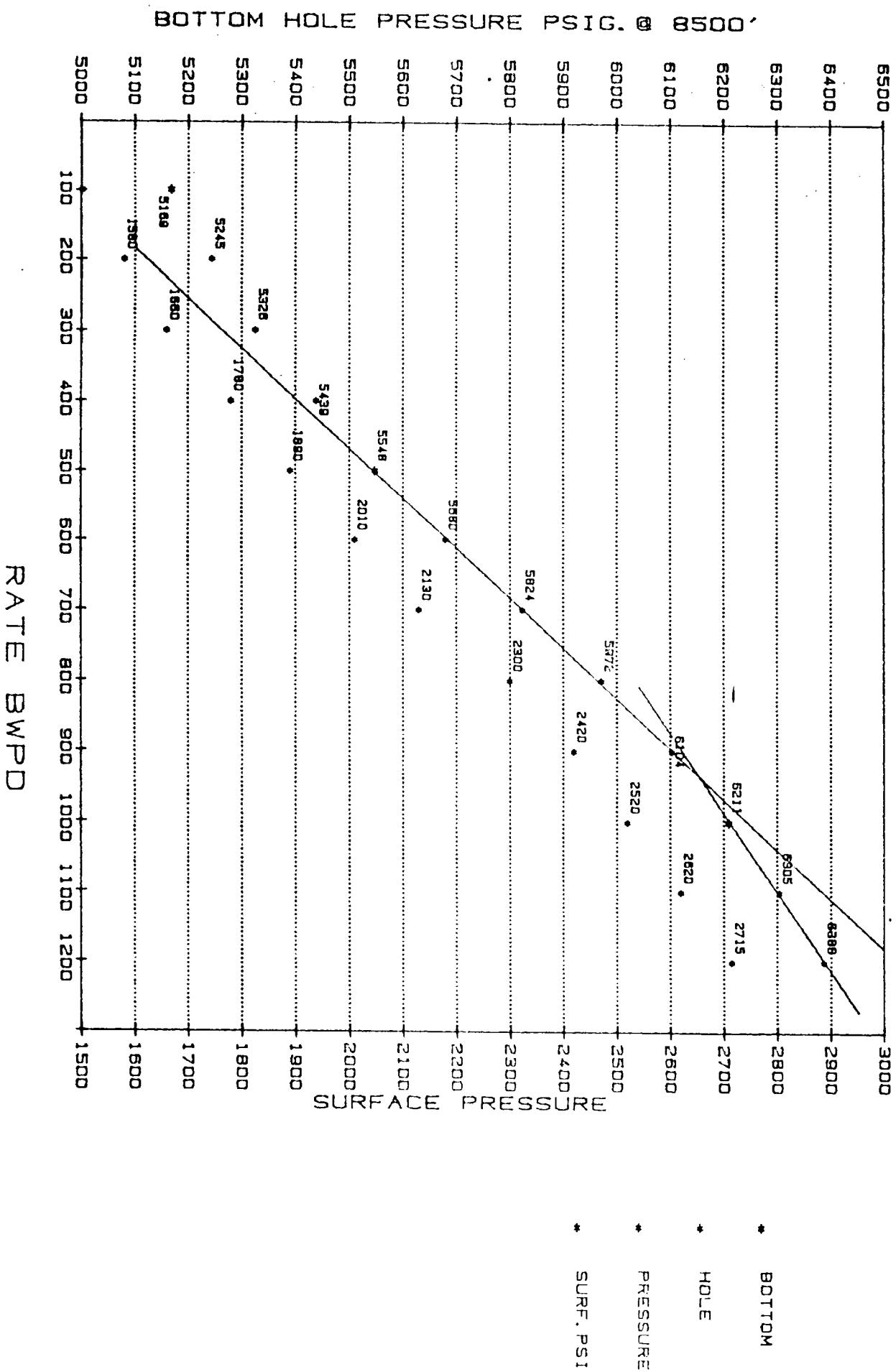
M. E. Sweeney
Environmental & Regulatory Mgr.

CCSmith/

Attachments

cc: District Director OCD-Hobbs

NORTH VACUUM ABO UNIT NO. 156 STEP RATE TEST



TYLER SURVEYS, INC

915/523-6826

908 CARDINAL CREST
ANDREWS, TEXAS 79714

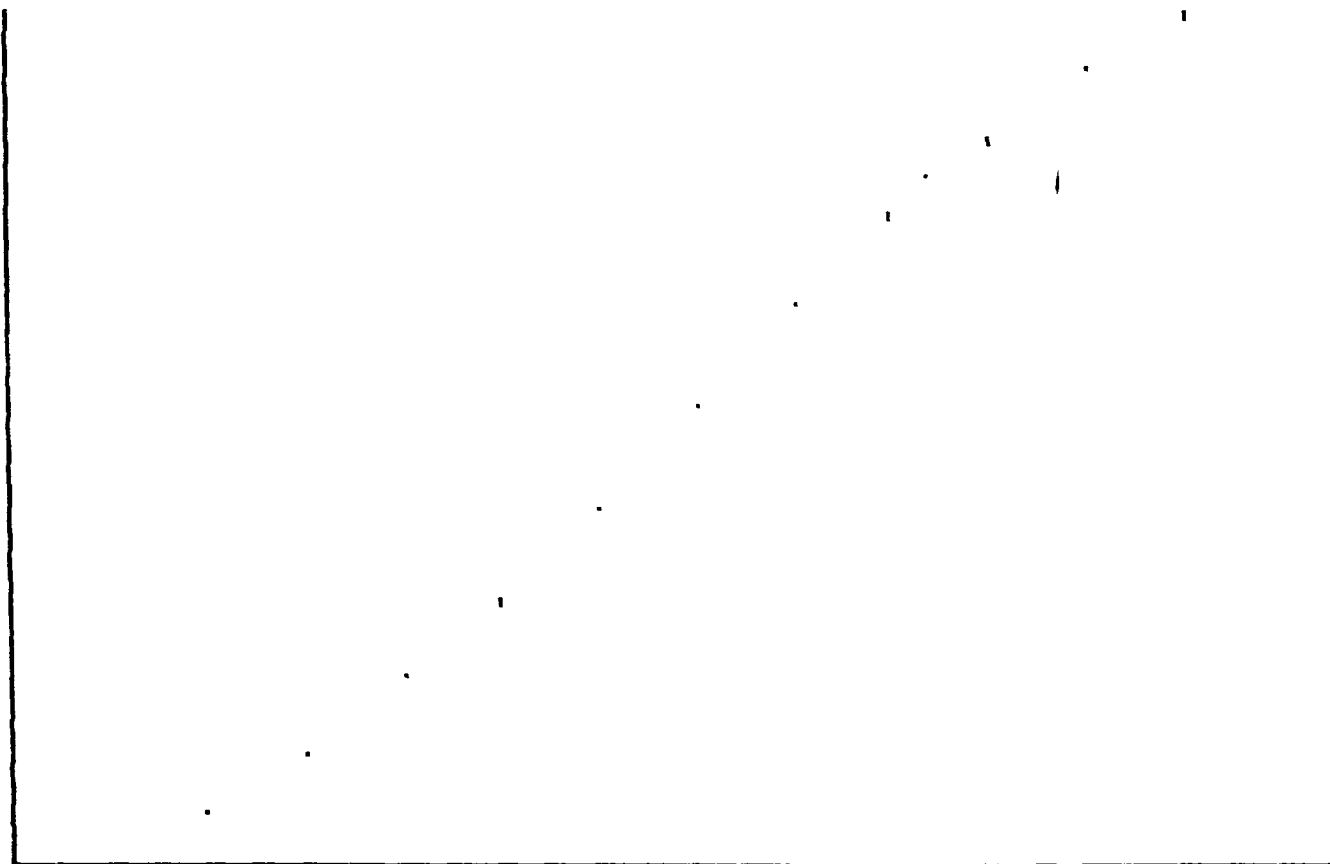
COMPANY - MOBIL PROD. TEX.& N.M. INC.
WELL NUMBER N.VACUUM ABO UNIT NO.156
BHP₂ DEPTH - 8500' FT

DATE - 9-22

STABILIZATION
RATE - 113 BHPD PRESURE - 1500 PSIG

INCREMENTS:
RATE - 100 BHPD STEP LENGTH - 15 MIN

TEST RESULTS
FORMATION PARTING POINT - 6154 PSIG @ 934 BHPD
SURFACE STATIC PART. 2485 PSIG



TYLER SURVEYS, INC

915/523-6826 908 CARDINAL CREST
ANDREWS, TEXAS 79714

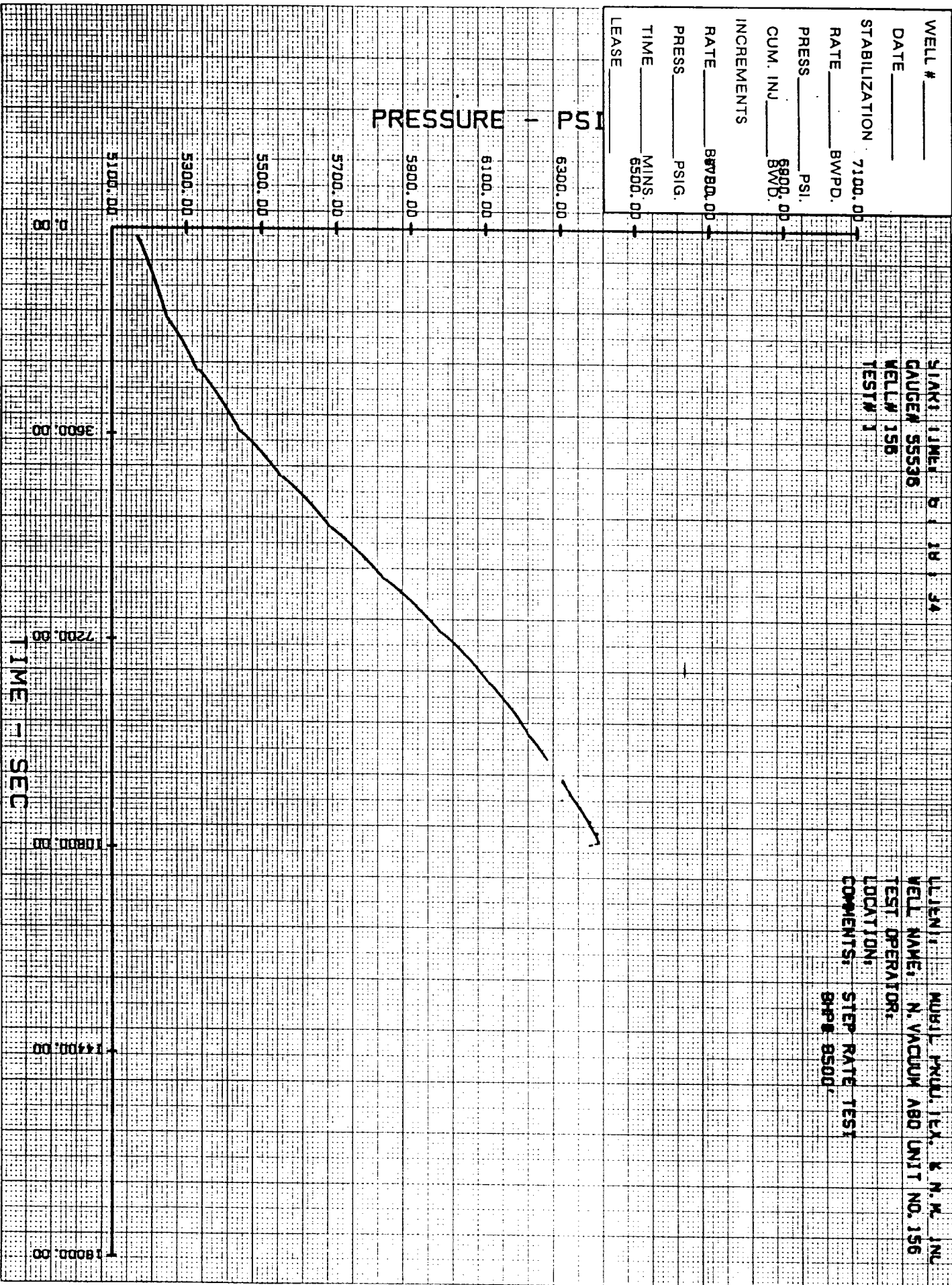
ACCUMULATED DATA

WELL #156

RATE BWPD	BOTTOM HOLE PRESSURE PSIG
100	5169
100	5159
200	5245
300	5326
400	5439
500	5548
600	5680
700	5824
800	5972
900	6104
1000	6211
1100	6305
1200	6388

0 , 5327.83334 TO 1300,6478.33334
1100.5698 , 6388 TO 232.336183 , 5169

STEP RATE TESTERS INC.

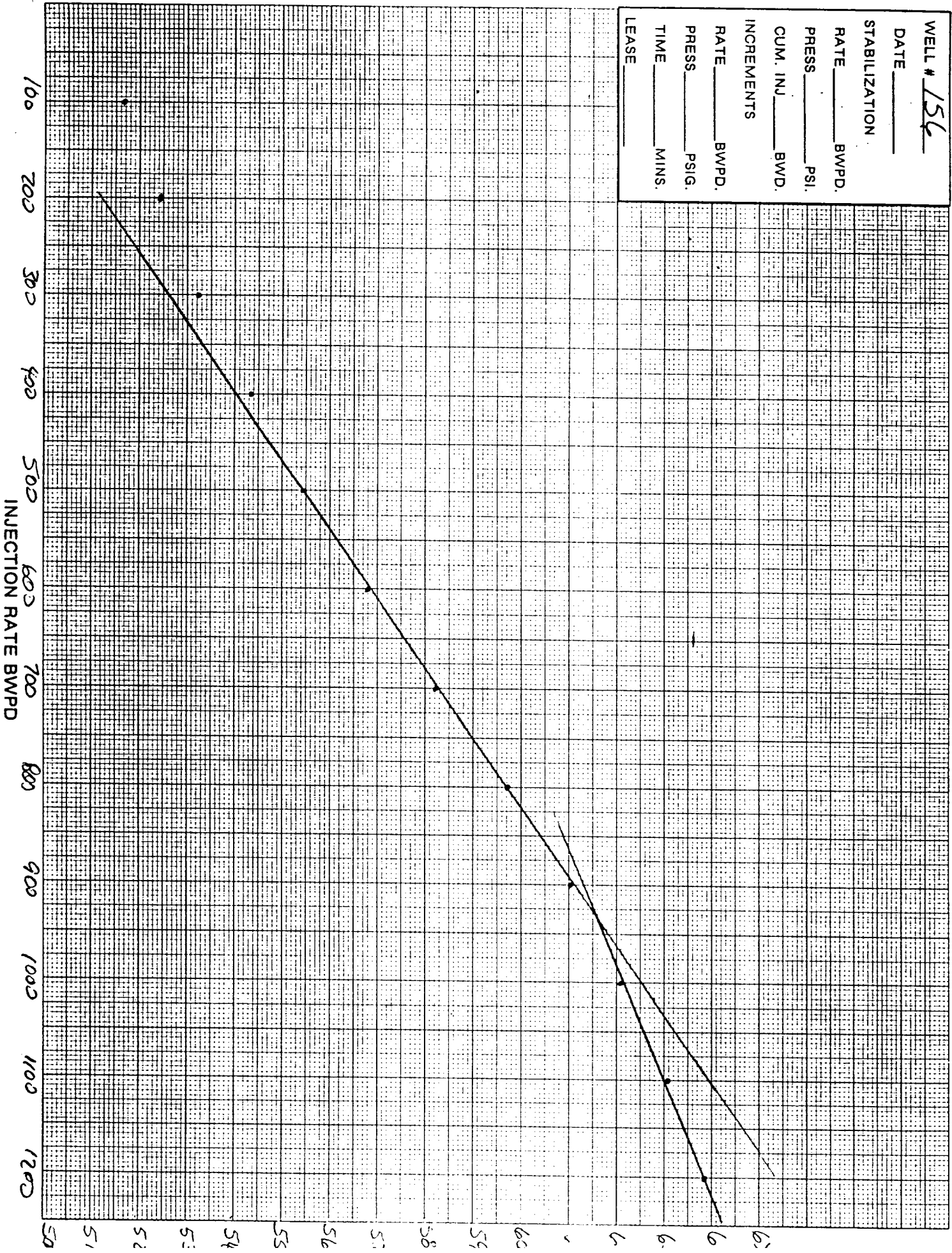


BOTTOM HOLE OR SURFACE PRESSURE (PSI)

INJECTION RATE BWPD

STEP RATE TESTERS INC.

WELL # 156
DATE _____
STABILIZATION _____
RATE _____ BWPD.
PRESS _____ PSI.
CUM. INJ _____ BWD.
INCREMENTS _____
RATE _____ BWPD.
PRESS _____ PSIG.
TIME _____ MINS.
LEASE _____



STEP RATE TESTERS, INC.

915/366-3409

P. O. Box 6414

ODESSA, TEXAS 79762

No. _____

COMPANY Mobil Production Tex & New DATE 9-22-86

ADDRESS _____

WELL # 156 LEASE N. V. H. 1130

WELL FILE DATA:

T.D. _____ PACKERS @ _____ PERFS. _____
TBG. ID. _____ TBG. COATING _____ DEPTH SN. _____ BHP @ 8500'

STABILIZATION:

RATE 113 BWPD PRES. 1610 PSIG. CUMULATIVE _____ BBLS.

INCREMENTS:

RATE 100 BWPD PRES. _____ PSIG. STEP LENGTH 15 MINS.

TEST RESULTS:

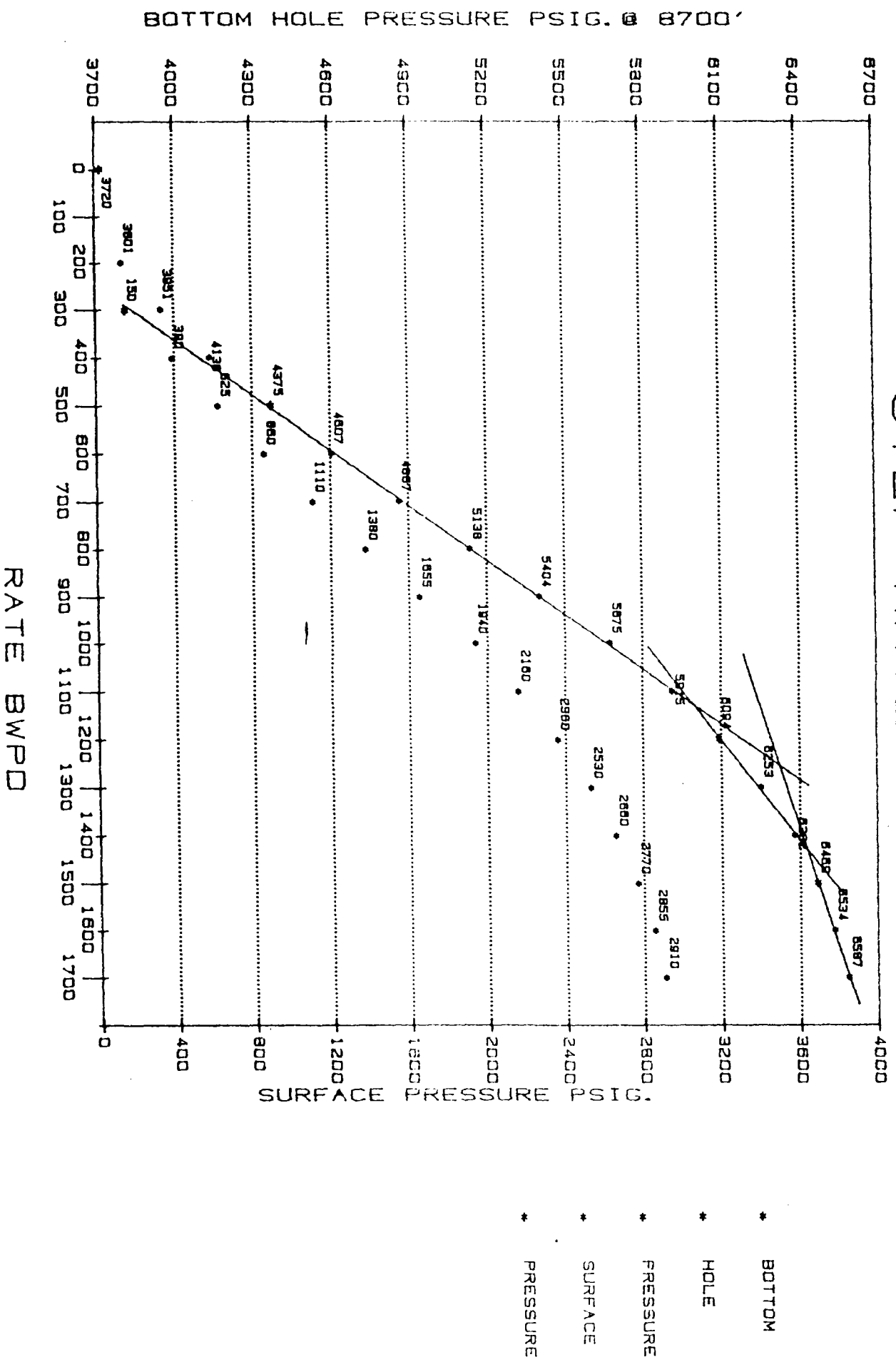
FORMATION PARTING POINT _____ PSIG. @ _____ BWPD

	RATE BWPD	PRESSURE SURFACE PSIG.		PRESSURE MINUS FRICTION PSIG.	PRESSURE BOTTOM HOLE PSIG.	
1.	<u>200</u>	<u>1500</u>	<u>30</u>		<u>5169</u>	
2.	<u>300</u>	<u>1580</u>	<u>45</u>	<u>1</u>	<u>5245</u>	<u>76</u>
3.	<u>370</u>	<u>1660</u>	<u>7:00</u>		<u>5326</u>	<u>81</u>
4.	<u>400</u>	<u>1780</u>	<u>15</u>		<u>5439</u>	<u>113</u>
5.	<u>500</u>	<u>1890</u>	<u>30</u>		<u>5548</u>	<u>109</u>
6.	<u>600</u>	<u>2010</u>	<u>45</u>		<u>5680</u>	<u>132</u>
7.	<u>700</u>	<u>2130</u>	<u>8:00</u>		<u>5824</u>	<u>144</u>
8.	<u>800</u>	<u>2300</u>	<u>15</u>		<u>5972</u>	<u>148</u>
9.	<u>900</u>	<u>2420</u>	<u>30</u>		<u>6104</u>	<u>132</u>
10.	<u>1000</u>	<u>2520</u>	<u>45</u>		<u>6211</u>	<u>107</u>
11.	<u>1100</u>	<u>2620</u>	<u>9:00</u>		<u>6305</u>	
12.	<u>1200</u>	<u>2715</u>	<u>15</u>		<u>6388</u>	
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						

REMARKS _____

TESTER _____ COMPANY REP. _____

NORTH VACUUM ABO UNIT NO. 203 STEP RATE TEST



TYLER SURVEYS, INC

915/523-6826

908 CARDINAL CREST
ANDREWS, TEXAS 79714

COMPANY - MOBIL PROD. TEX.& N.M. INC.

DATE - 10-6

WELL NUMBER 203

BHP₂ DEPTH - 8700' FT

STABILIZATION

RATE - 0 BWPD PRESURE - -81 PSIG

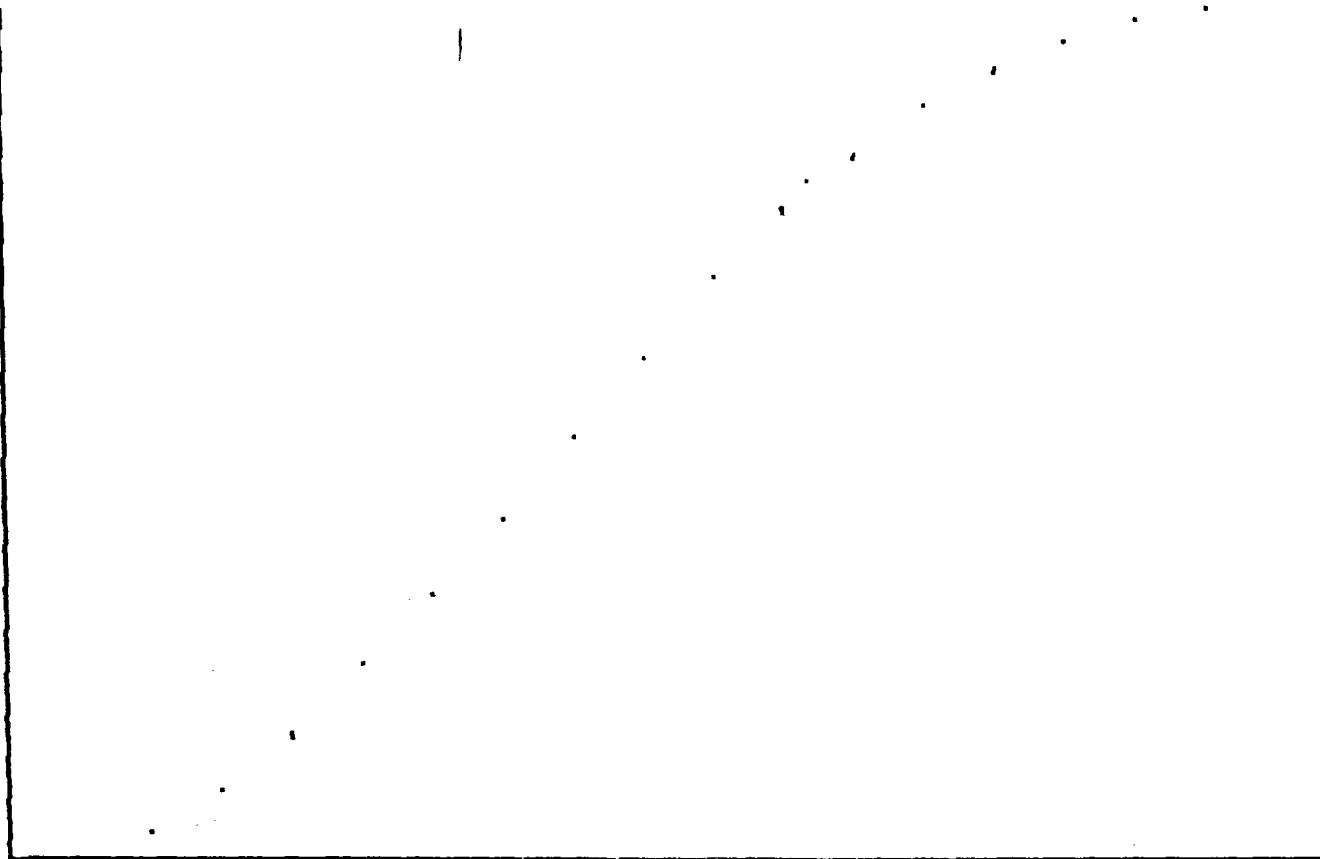
INCREMENTS:

RATE - 100 BWPD STEP LENGTH - 15 MIN

TEST RESULTS

FORMATION PARTING POINT - 4006 PSIG @ 1135 BWPD

SURFACE STATIC PART. 2205 PSIG



TYLER SURVEYS, INC

915/523-6826

908 CARDINAL CREST
ANDREWS, TEXAS 79714

COMPANY - MOBIL PROD. TEX. & N.M. INC.

DATE - 10-6

WELL NUMBER 203

BHP2 DEPTH - 8700' FT

STABILIZATION

RATE - 0 BWPD PRESURE - -81 PSIG

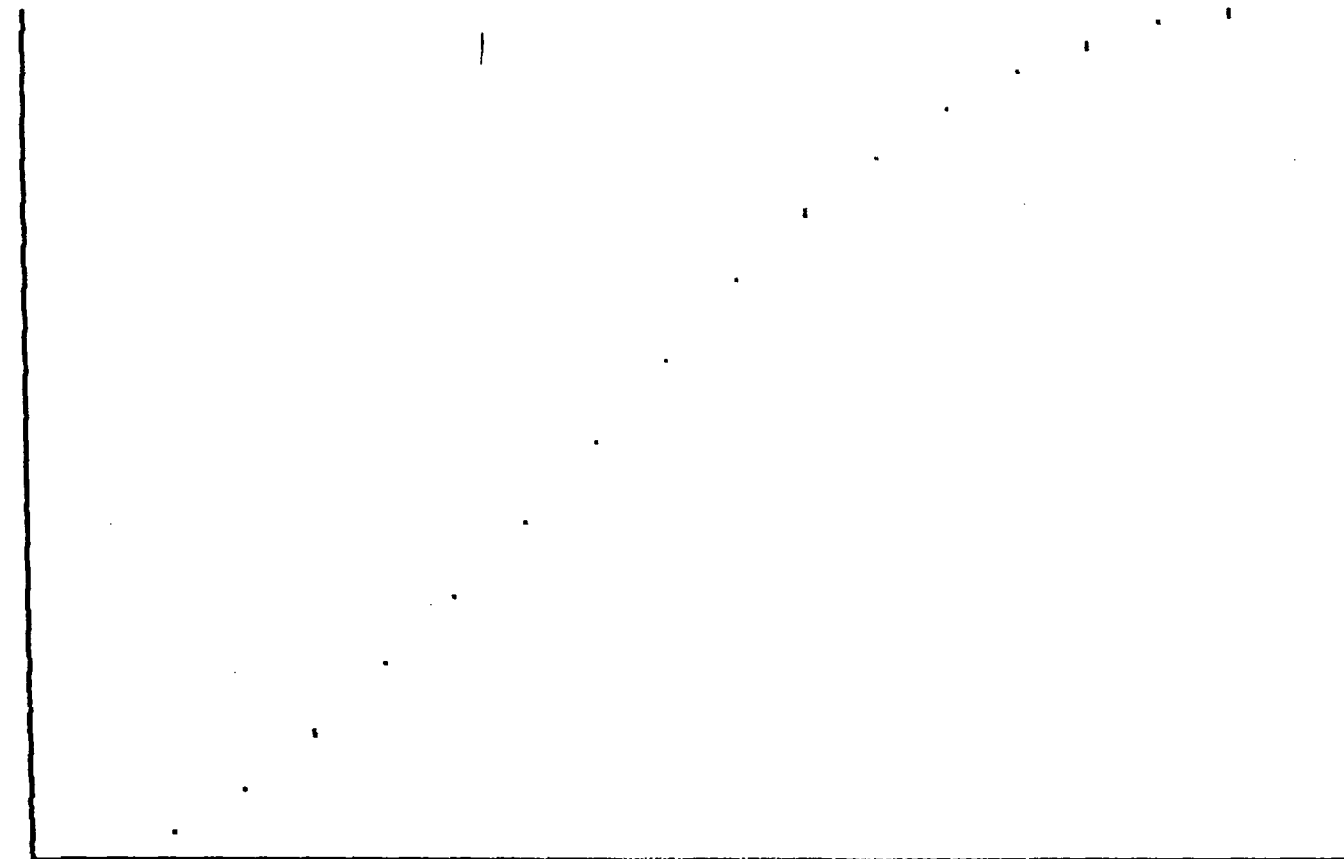
INCREMENTS:

RATE - 100 BWPD STEP LENGTH - 15 MIN

TEST RESULTS

FORMATION PARTING POINT - 6330 PSIG @ 1261 BWPD

SURFACE STATIC PART. 2529 PSIG

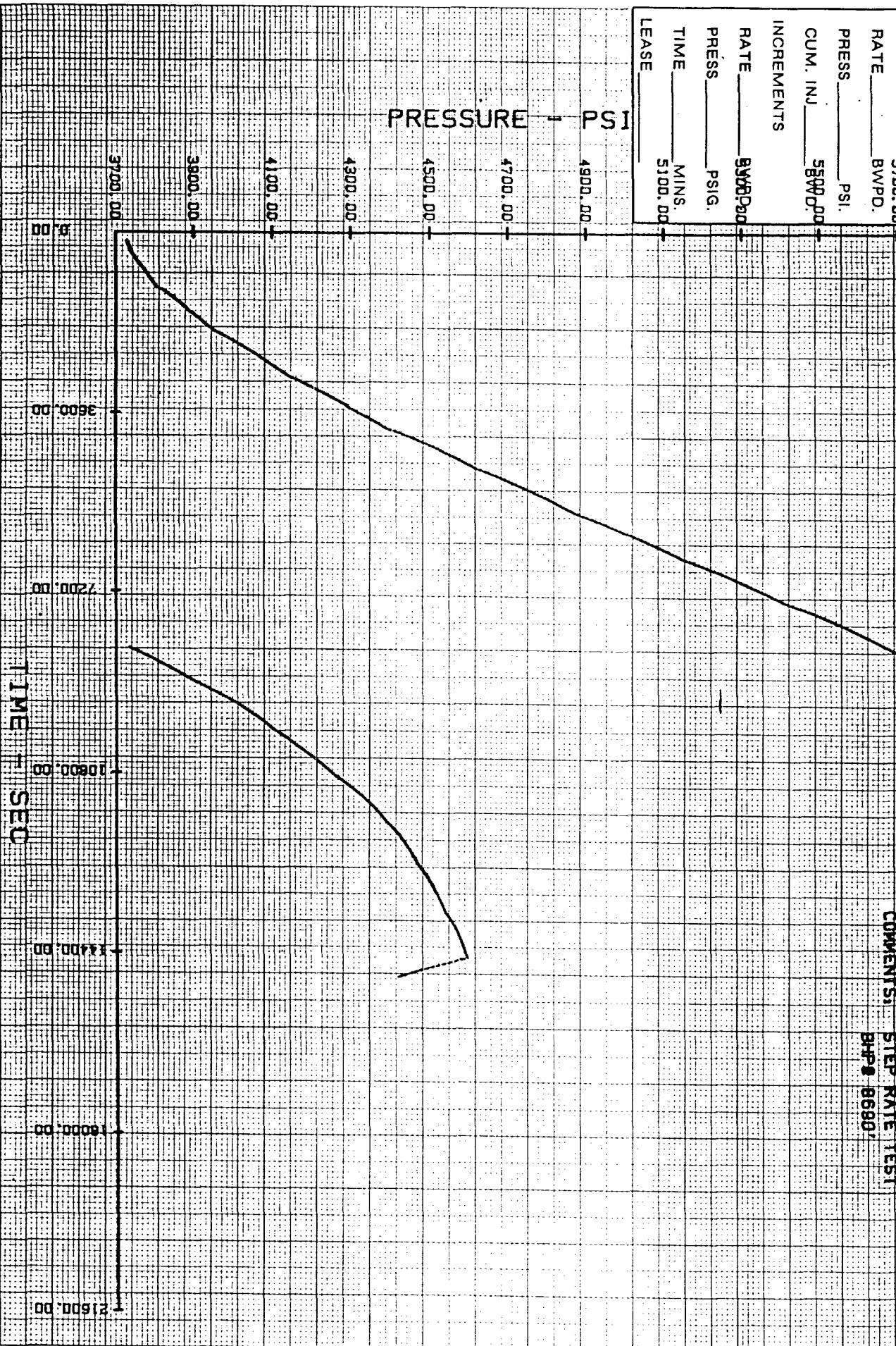


STEP RATE TESTERS INC.

WELL # 203
 DATE _____
 STABILIZATION _____
 RATE _____ BWPD.
 PRESS _____ PSI.
 CUM. INJ _____
 INCREMENTS _____
 RATE _____ BWPD.
 PRESS _____ PSI.
 TIME _____ MINS.
 LEASE _____

START TIME: 11:21:31
 GAUGE# 55536
 WELL# 203
 TEST# 1

CLIENT: MORRIS-PRUL, TEX & N.M. INC.
 WELL NAME: NORTH VAC. ABO UNIT NO. 203
 TEST OPERATOR: TYLER
 LOCATION: _____
 COMMENTS: STEP RATE TEST
 BHP# 86907



INJECTION RATE BWPD

BOTTOM HOLE OR SURFACE PRESSURE (PSI)

STEP RATE TESTERS, INC.

915/366-3409

P. O. Box 6414

ODESSA, TEXAS 79762

No. _____

COMPANY Mob. 1 DATE 10-6-86

ADDRESS _____

WELL # 203 LEASE N. Vac ABO Unit

WELL FILE DATA:

T.D. _____ PACKERS @ _____ PERFS. _____

TBG. ID. _____ TBG. COATING _____ DEPTH SN. _____ BHP @ 8700

STABILIZATION:

RATE 0 BHPD PRES. 0 PSIG. CUMULATIVE _____ BBLS.

INCREMENTS:

RATE 100 BHPD PRES. _____ PSIG. STEP LENGTH 1.5 MINS.

TEST RESULTS:

FORMATION PARTING POINT _____ PSIG. @ _____ BHPD

	RATE BHPD	PRESSURE SURFACE PSIG.		PRESSURE MINUS FRICTION PSIG.	PRESSURE BOTTOM HOLE PSIG.
1.	0	0	11:05		3881 3720
2.	200		20		3801
3.	300	150	35	150	3951
4.	400	390	50	390	4138
5.	500	625	12:05	4	4375
6.	600	860	20	232	4607
7.	700	1110	35	260	4867
8.	800	1380	50	271	5138
9.	900	1655	1:05	266	5404
10.	1000	1940	20	271	5675
11.	1100	2160	35	240	5915
12.	1200	2360	50	179	6094
13.	1300	2530	2:05	159	6253
14.	1400	2660	20	129	6382
15.	1500	2770	35	87	6469
16.	1600	2855	50		6534
17.	1700	2910	3:05		6587
18.	1800		20		
19.	1900		35		
20.	2000		50		

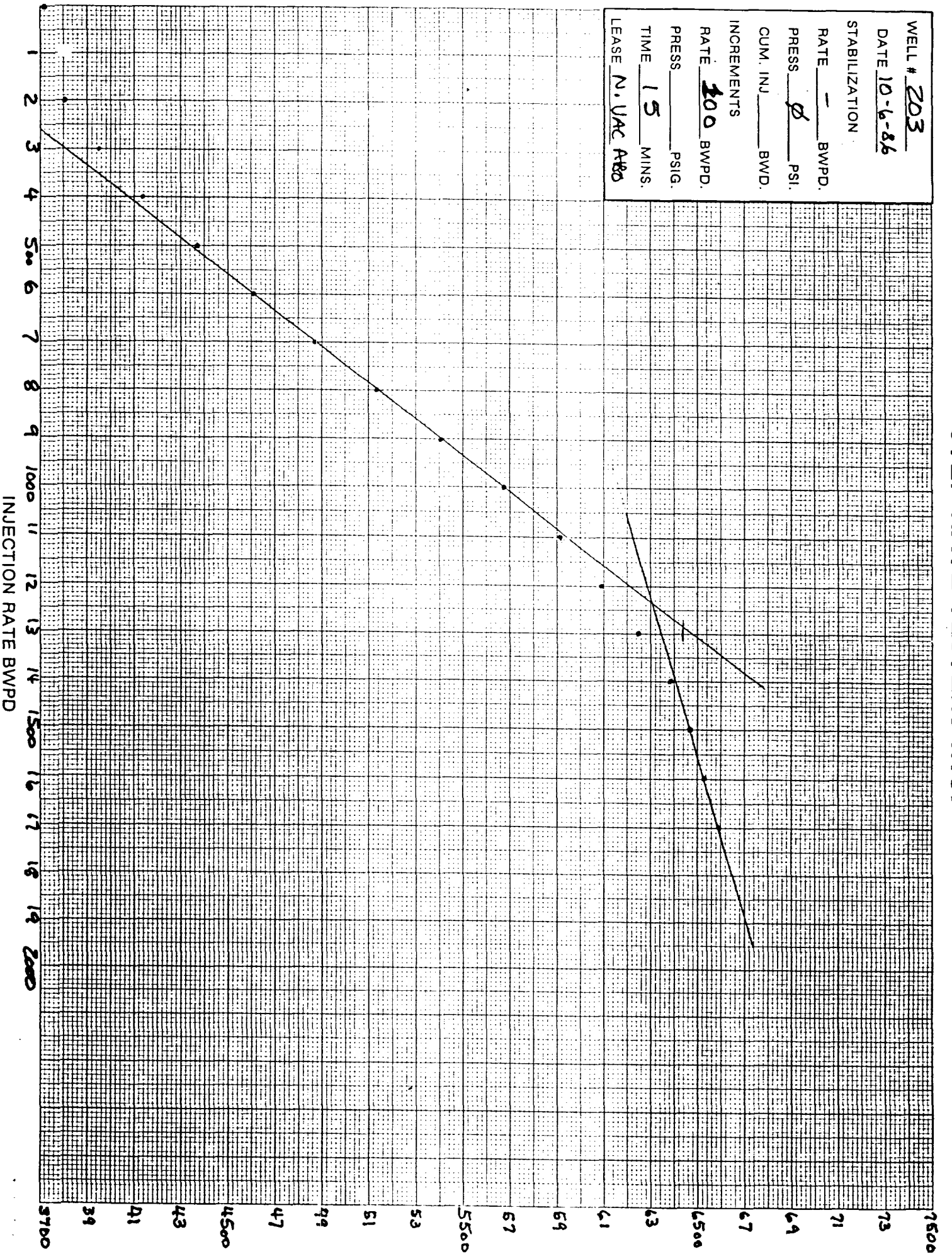
REMARKS _____

TESTER _____ COMPANY REP. _____

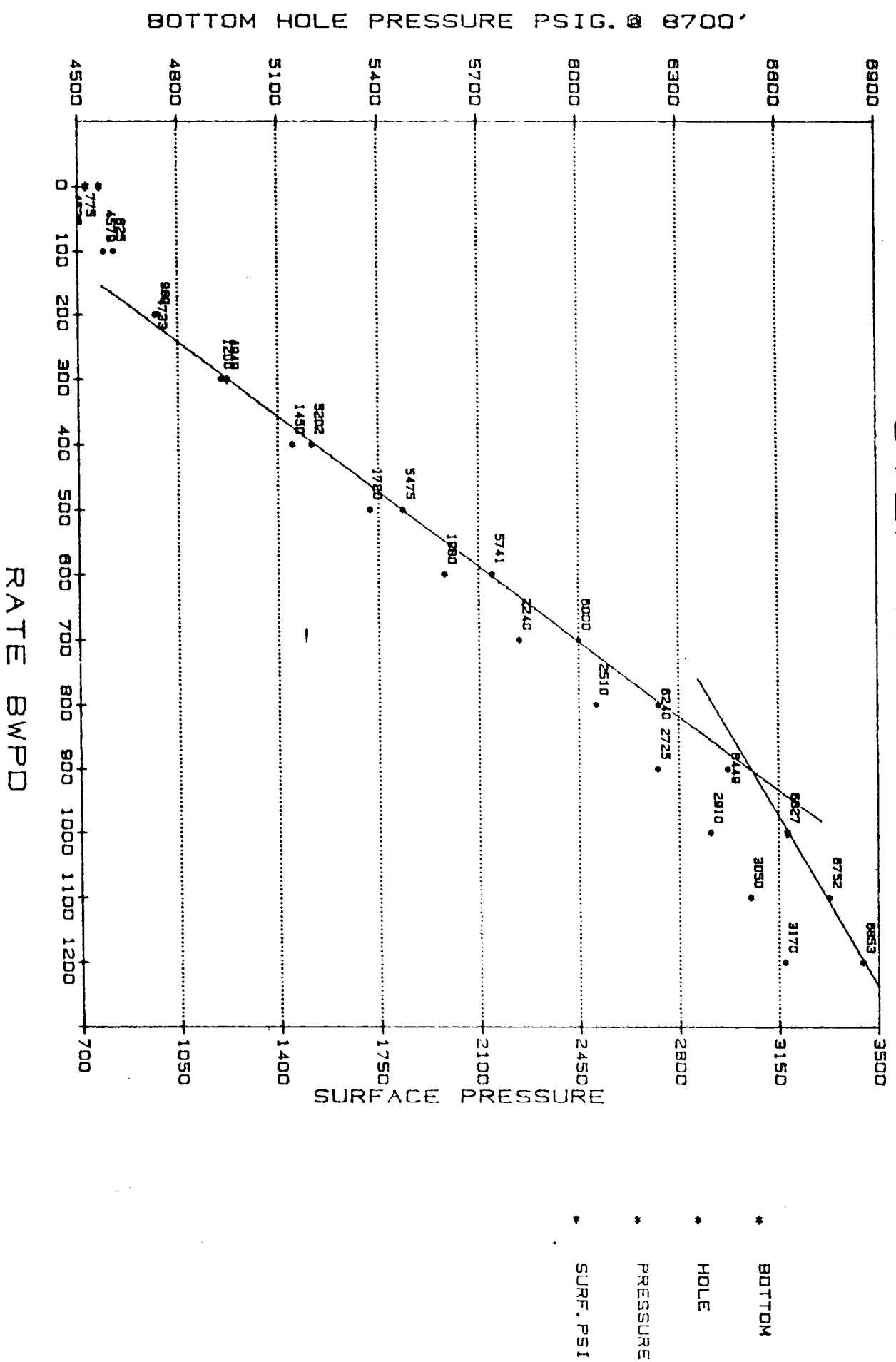
STEP RATE TESTERS INC.

BOTTOM HOLE OR SURFACE PRESSURE (PSI) 8700

WELL # 203
 DATE 10-6-86
 STABILIZATION
 RATE — BWPD.
 PRESS 0 PSI.
 CUM. INJ — BWD.
 INCREMENTS
 RATE 100 BWPD.
 PRESS — PSIG.
 TIME 15 MINS.
 LEASE N. VAC A80



NORTH VACUUM ABO UNIT NO. 209 STEP RATE TEST



TYLER SURVEYS, INC

915/523-6826

908 CARDINAL CREST
ANDREWS, TEXAS 79714

~~8888~~BANY - MOBIL PROD. TEX.& N.M. INC.
WELL NUMBER NORTH VACUUM ABO UNIT NO.209
BHP₂ DEPTH - 8700' FT

DATE - 10-

STABILIZATION

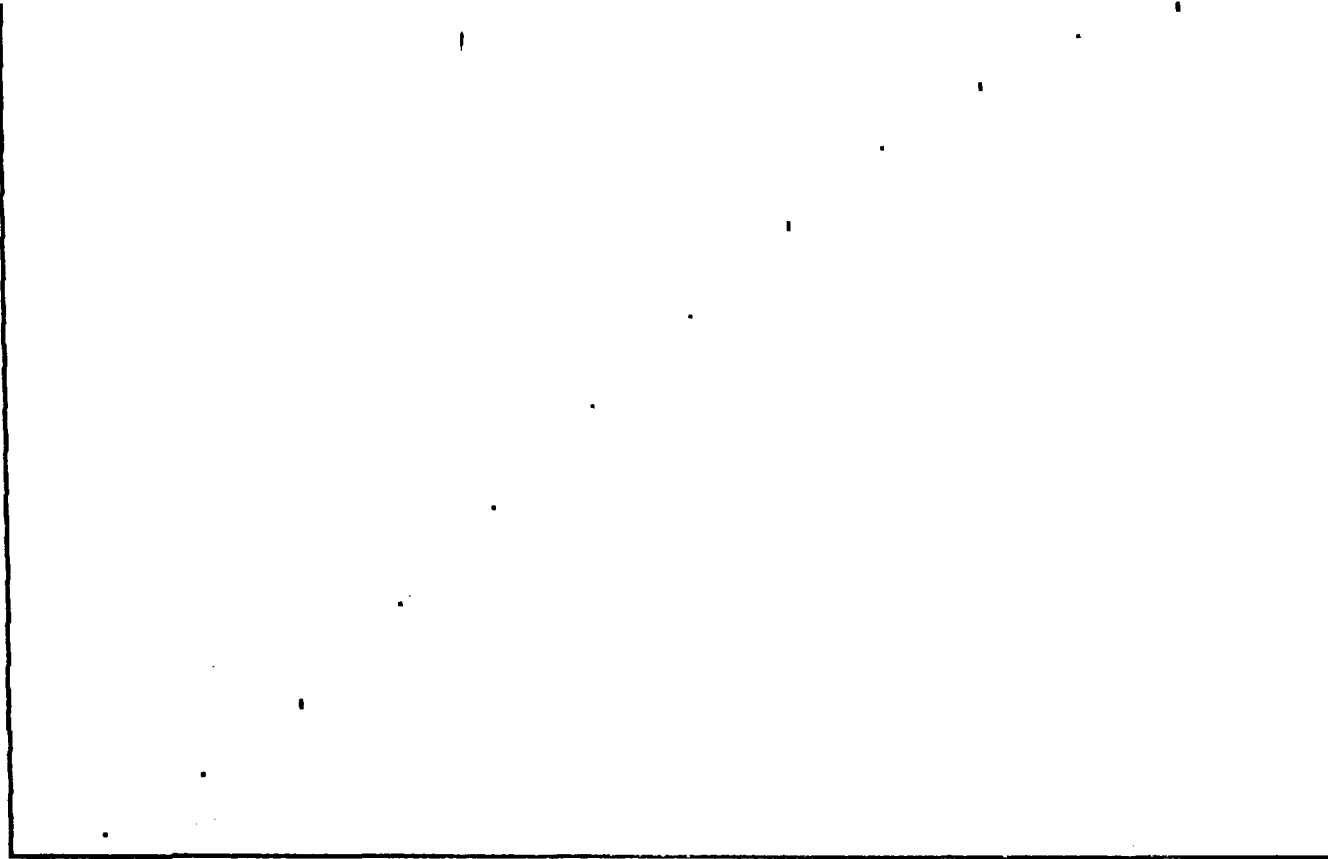
RATE - 0 BWPD PRESURE - 775 PSIG

INCREMENTS:

RATE - 100 BWPD STEP LENGTH - 15 MIN

TEST RESULTS

FORMATION PARTING POINT - 6522 PSIG @ 903 BWPD
SURFACE STATIC PART. 2771 PSIG



TYLER SURVEYS, INC

915/523-6826 908 CARDINAL CREST
ANDREWS, TEXAS 79714

ACCUMULATED DATA WELL #209

RATE BWPD	BOTTOM HOLE PRESSURE PSIG
0	4526
100	4579
200	4733
300	4949
400	5202
500	5475
600	5741
700	6000
800	6240
900	6449
1000	6627
1100	6752
1200	6853

0 , 5501 TO 1300,6970
1030.68203 , 6853 TO 137.154873 , 4526

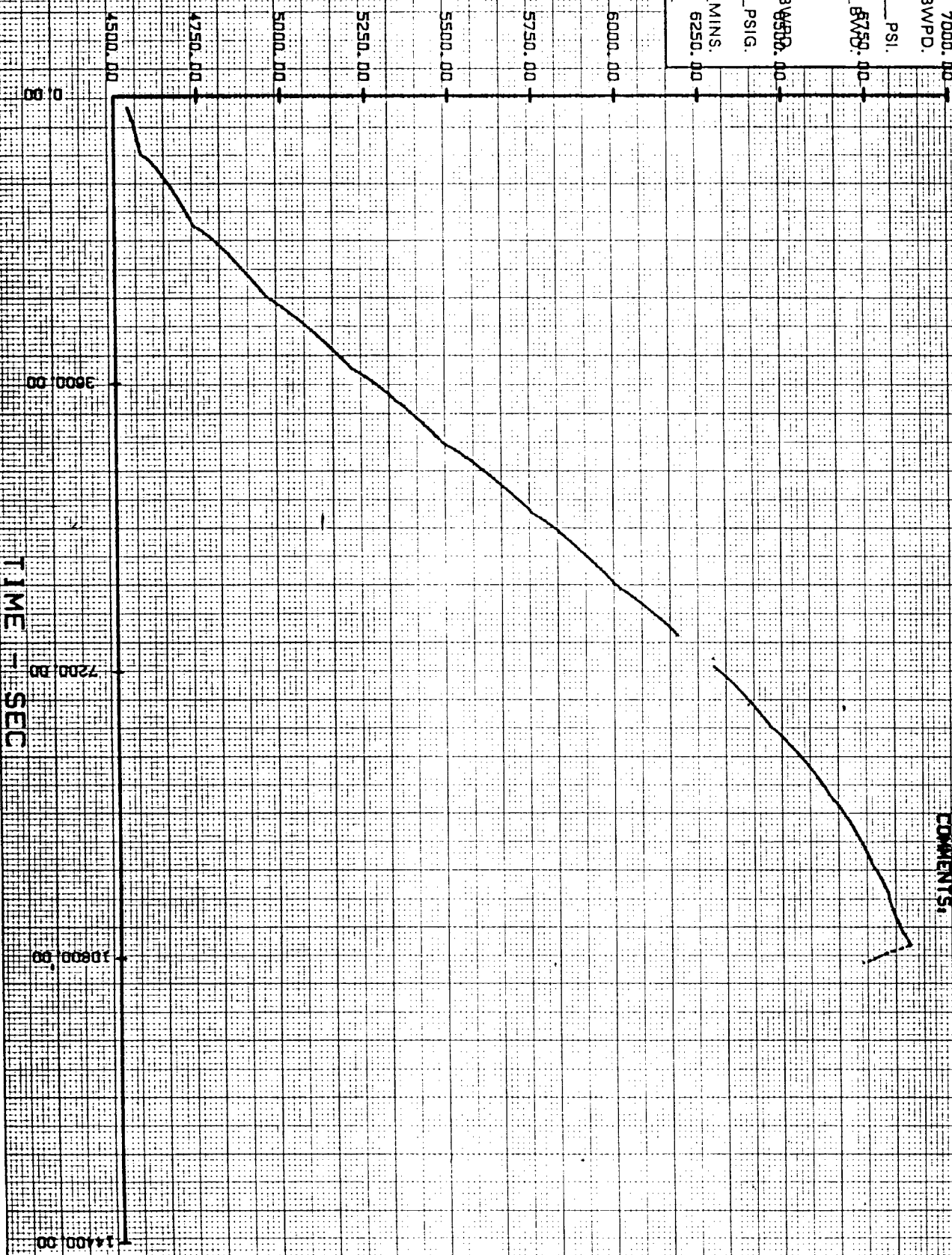
STEP RATE TESTERS INC.

WELL # 209
 DATE _____
 STABILIZATION _____
 RATE _____ BWPD.
 PRESS _____ PSI.
 CUM. INJ _____ BWPD.
 INCREMENTS _____
 RATE _____ BWPD.
 PRESS _____ PSI.
 TIME _____ MINS.
 LEASE _____

START TIME: 3:41:1
 GAUGE# 55536
 WELL# 209
 TEST# 1

CLIENT:
 WELL NAME:
 TEST OPERATOR:
 LOCATION:
 COMMENTS:

PRESSURE - PSI



TIME - SEC

STEP RATE TESTERS, INC.

915/366-3409

P. O. Box 6414

ODESSA, TEXAS 79762

No. _____

COMPANY Mobil DATE 10-8-86

ADDRESS _____

WELL # 209 LEASE N. V. ABC Elmer

WELL FILE DATA:

T.D. _____ PACKERS @ _____ PERFS. _____

TBG. ID. _____ TBG. COATING _____ DEPTH SN. _____ BHP @ 8700

STABILIZATION:

RATE 000 BHPD PRES. 775 PSIG. CUMULATIVE _____ BBLs.

INCREMENTS:

RATE 100 BHPD PRES. _____ PSIG. STEP LENGTH 15 MINS.

TEST RESULTS:

FORMATION PARTING POINT _____ PSIG. @ _____ BHPD

	RATE BHPD	PRESSURE SURFACE PSIG.		PRESSURE MINUS FRICTION PSIG.	PRESSURE BOTTOM HOLE PSIG.
1.	<u>000</u>	<u>775</u>	<u>3.00</u>		<u>4526</u>
2.	<u>100</u>	<u>825</u>	<u>15</u>	<u>53</u>	<u>4579</u>
3.	<u>200</u>	<u>980</u>	<u>30</u>	<u>154</u>	<u>4733</u>
4.	<u>300</u>	<u>1200</u>	<u>45</u>	<u>216</u>	<u>4949</u>
5.	<u>400</u>	<u>1450</u>	<u>4.00</u>	<u>253</u>	<u>5202</u>
6.	<u>500</u>	<u>1720</u>	<u>15</u>	<u>273</u>	<u>5475</u>
7.	<u>600</u>	<u>1980</u>	<u>30</u>	<u>266</u>	<u>5741</u>
8.	<u>700</u>	<u>2240</u>	<u>45</u>	<u>259</u>	<u>6000</u>
9.	<u>800</u>	<u>2510</u>	<u>5.00</u>	<u>240</u>	<u>6240</u>
10.	<u>900</u>	<u>2725</u>	<u>15</u>	<u>209</u>	<u>6449</u>
11.	<u>1000</u>	<u>2910</u>	<u>30</u>	<u>178</u>	<u>6627</u>
12.	<u>1100</u>	<u>3050</u>	<u>45</u>	<u>125</u>	<u>6752</u>
13.	<u>1200</u>		<u>6.00</u>		<u>6853</u>
14.					
15.					
16.					
17.					
18.					
19.					
20.					

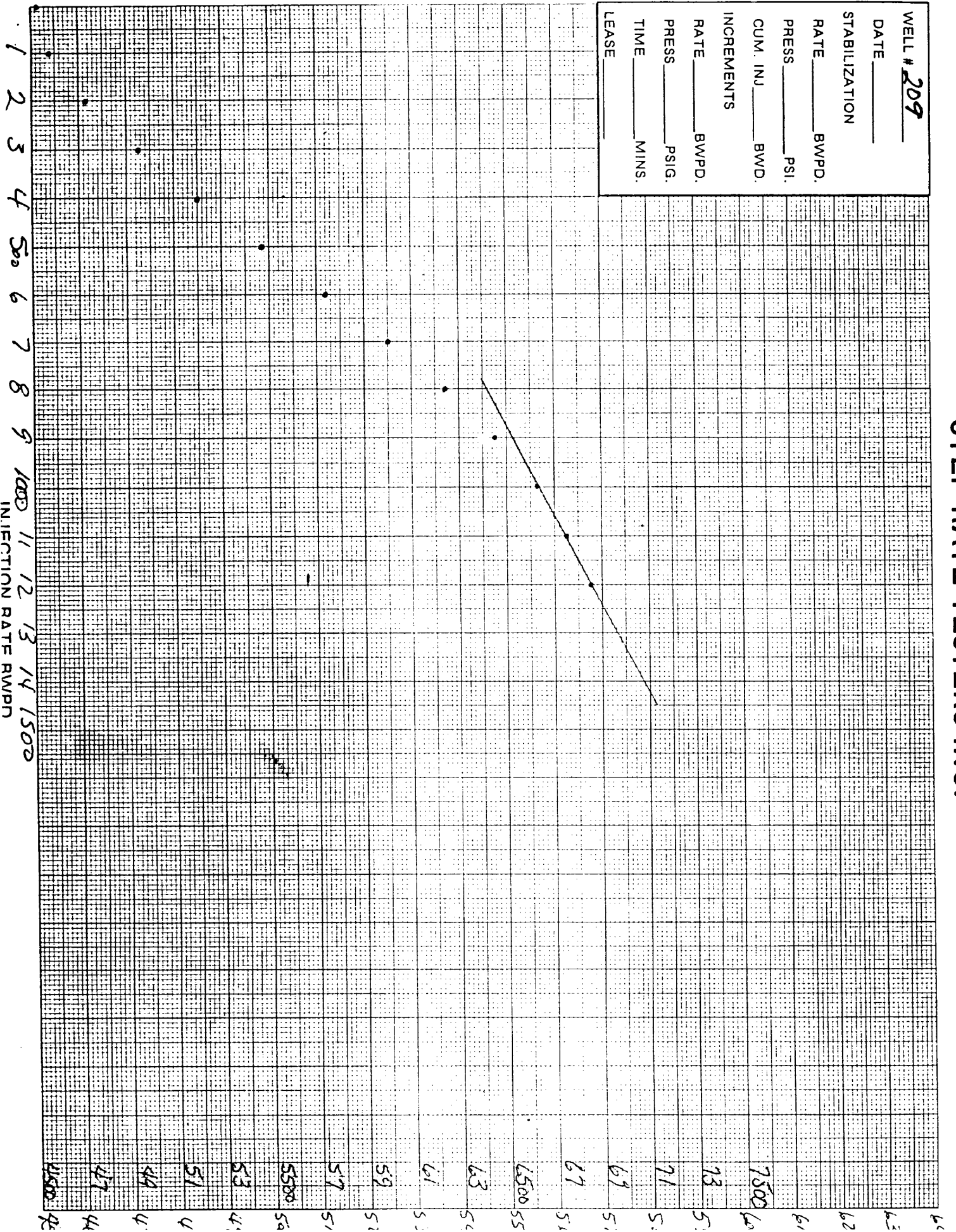
REMARKS _____

TESTER _____ COMPANY REP. _____

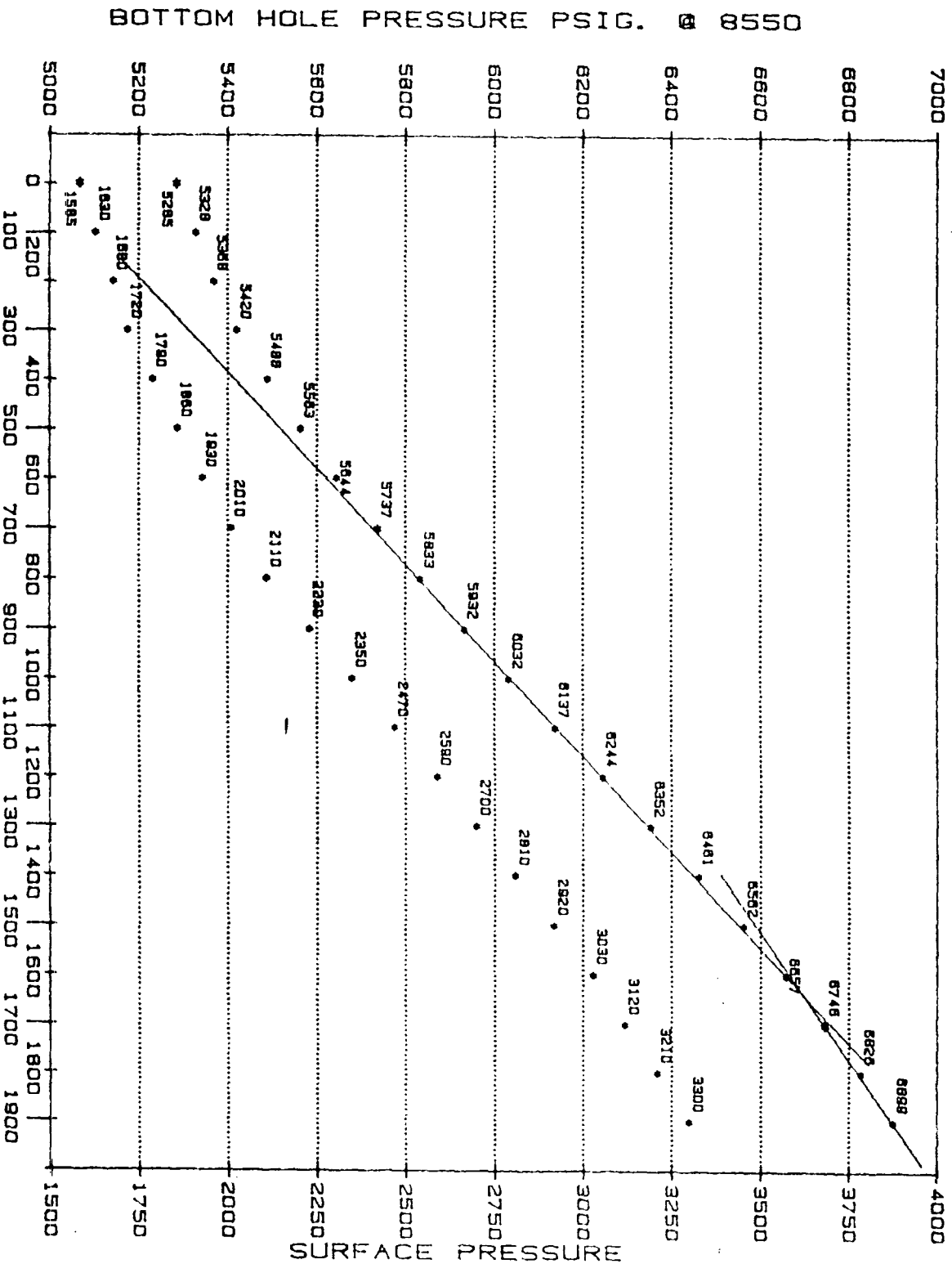
STEP RATE TESTERS INC.

WELL # 209
 DATE _____
 STABILIZATION _____
 RATE _____ BWPD.
 PRESS _____ PSI.
 CUM. INJ _____ BW.D.
 INCREMENTS _____
 RATE _____ BWPD.
 PRESS _____ PSIG.
 TIME _____ MINS.
 LEASE _____

BOTTOM HOLE OR SURFACE PRESSURE (PSI)



NORTH VACUUM ABO UNIT NO. 211 STEP RATE TEST



RATE BHPD

* BOTTOM
* HOLE
* PRESSURE
* SURF. PSI

TYLER SURVEYS, INC

915/523-6826

908 CARDINAL CREST

ANDREWS, TEXAS 79714

COMPANY - MOBIL PROD TEX.& N.M.INC.
WELL NUMBER N.VAC ABO UNIT NO.211
BHP2 DEPTH - 8550' FT

DATE - 9-22-

STABILIZATION

RATE - 0 BHPD

PRESURE - 1585 PSIG

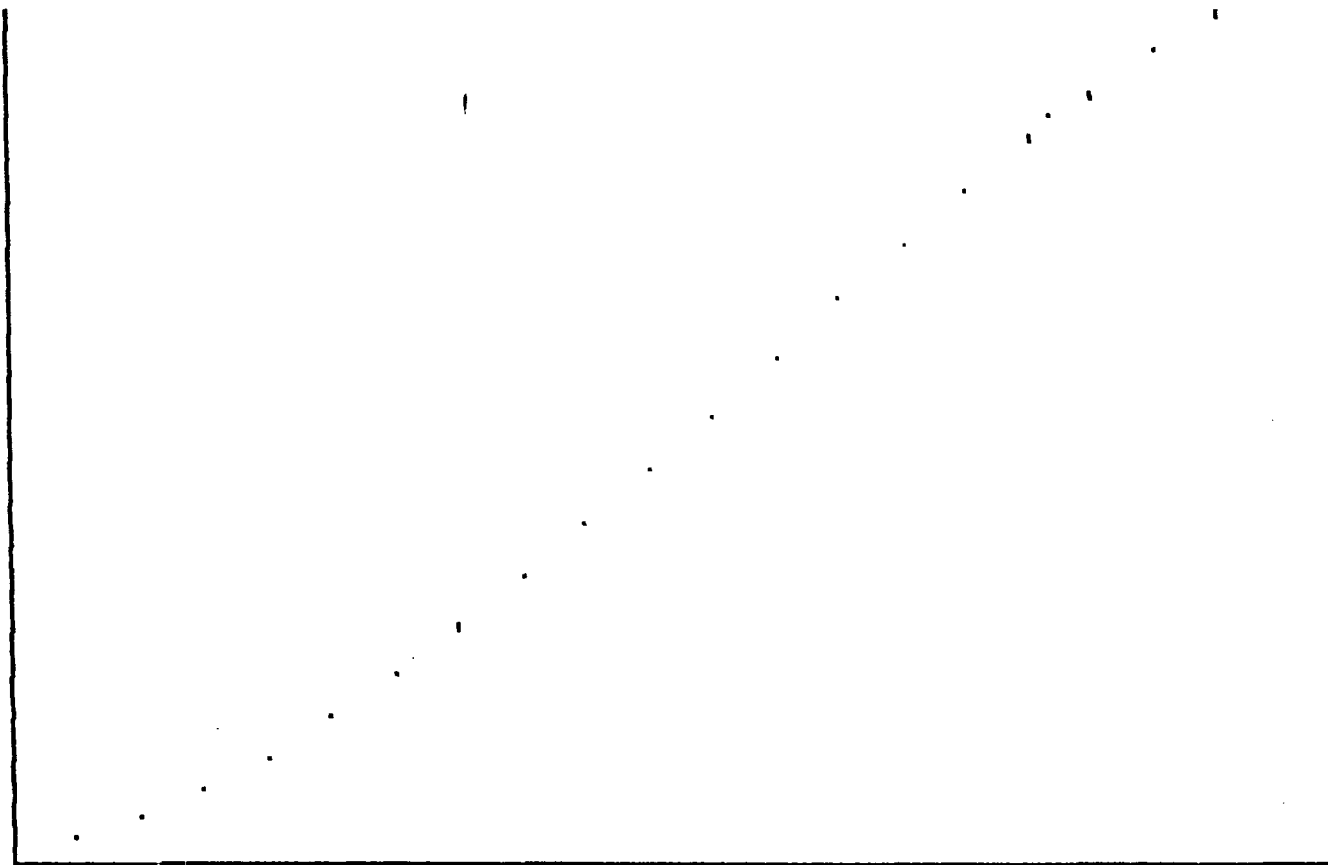
INCREMENTS:

RATE - 100 BHPD

STEP LENGTH - 15 MIN

TEST RESULTS

FORMATION PARTING POINT - 6698 PSIG @ 1635 BHPD
SURFACE STATIC PART. 2998 PSIG



TYLER SURVEYS, INC

915/523-6826 908 CARDINAL CREST
ANDREWS, TEXAS 79714

ACCUMULATED DATA WELL #211

RATE BWP	BOTTOM HOLE PRESSURE PSIG
0	5285
100	5328
200	5368
300	5420
400	5488
500	5563
600	5644
700	5737
800	5833
900	5932
1000	6032
1100	6137
1200	6244
1300	6352
1400	6461
1500	6562
1600	6657
1700	6746
1800	6826
1900	6899

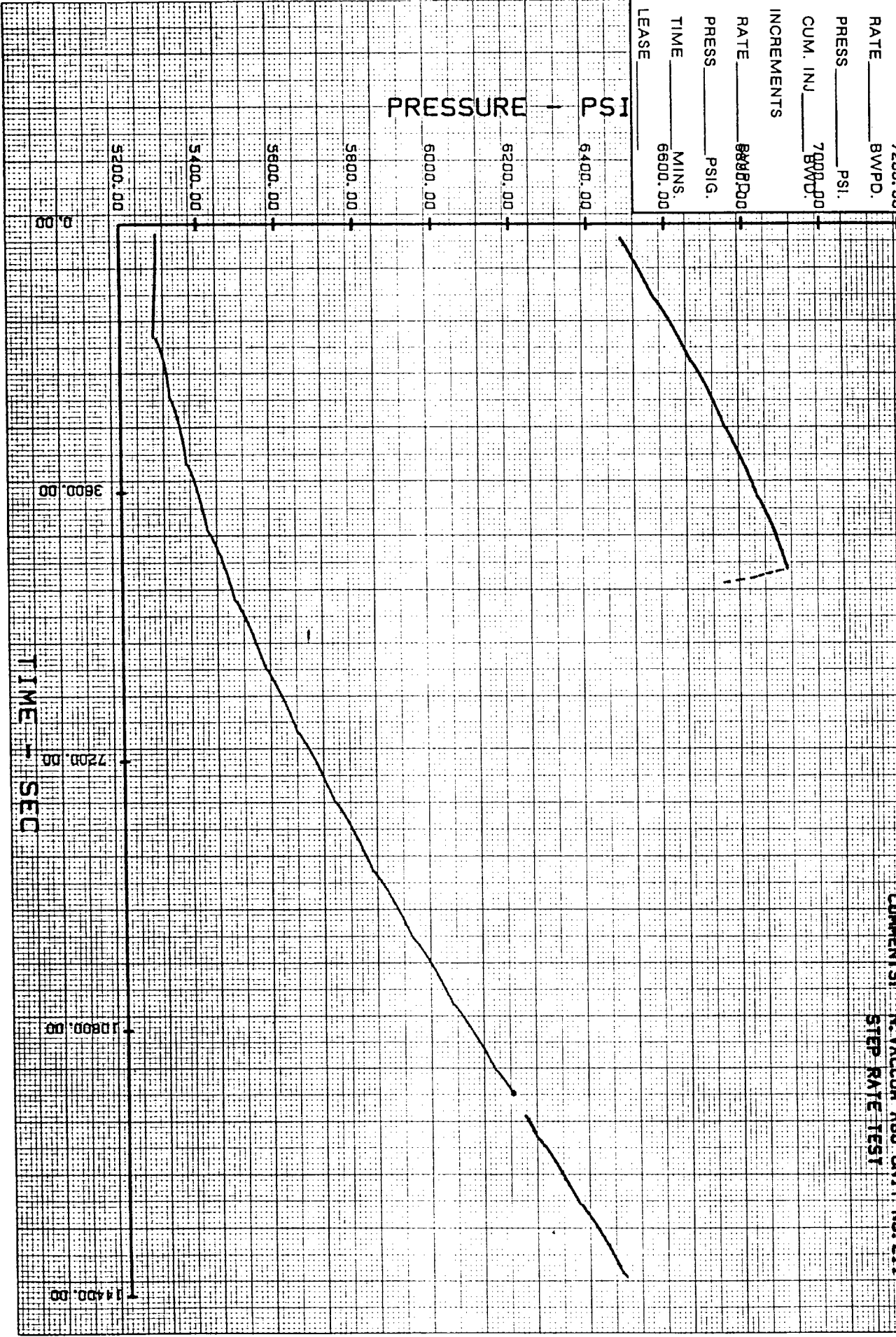
0 , 5446.6672 TO 2000,6976.6672
1829.78649 , 6899 TO 271.962561 , 5285

STEP RATE TESTERS INC.

WELL # 211
 DATE _____
 STABILIZATION 7200.00
 RATE _____ BWPD.
 PRESS _____ PSI.
 CUM. INJ _____ BWPD.
 INCREMENTS
 RATE _____ BWPD.
 PRESS _____ PSIG.
 TIME _____ MINS.
 LEASE _____

START TIME: 11:44
 GAUGE# 5536
 WELL# 211
 TEST# 0

CLIENT:
 WELL NAME:
 TEST OPERATOR:
 LOCATION:
 COMMENTS: N. VACUUM ABQ UNIT NO. 211
 STEP-RATE TEST



BOTTOM HOLE OR SURFACE PRESSURE (PSI)

PRESSURE — PSI

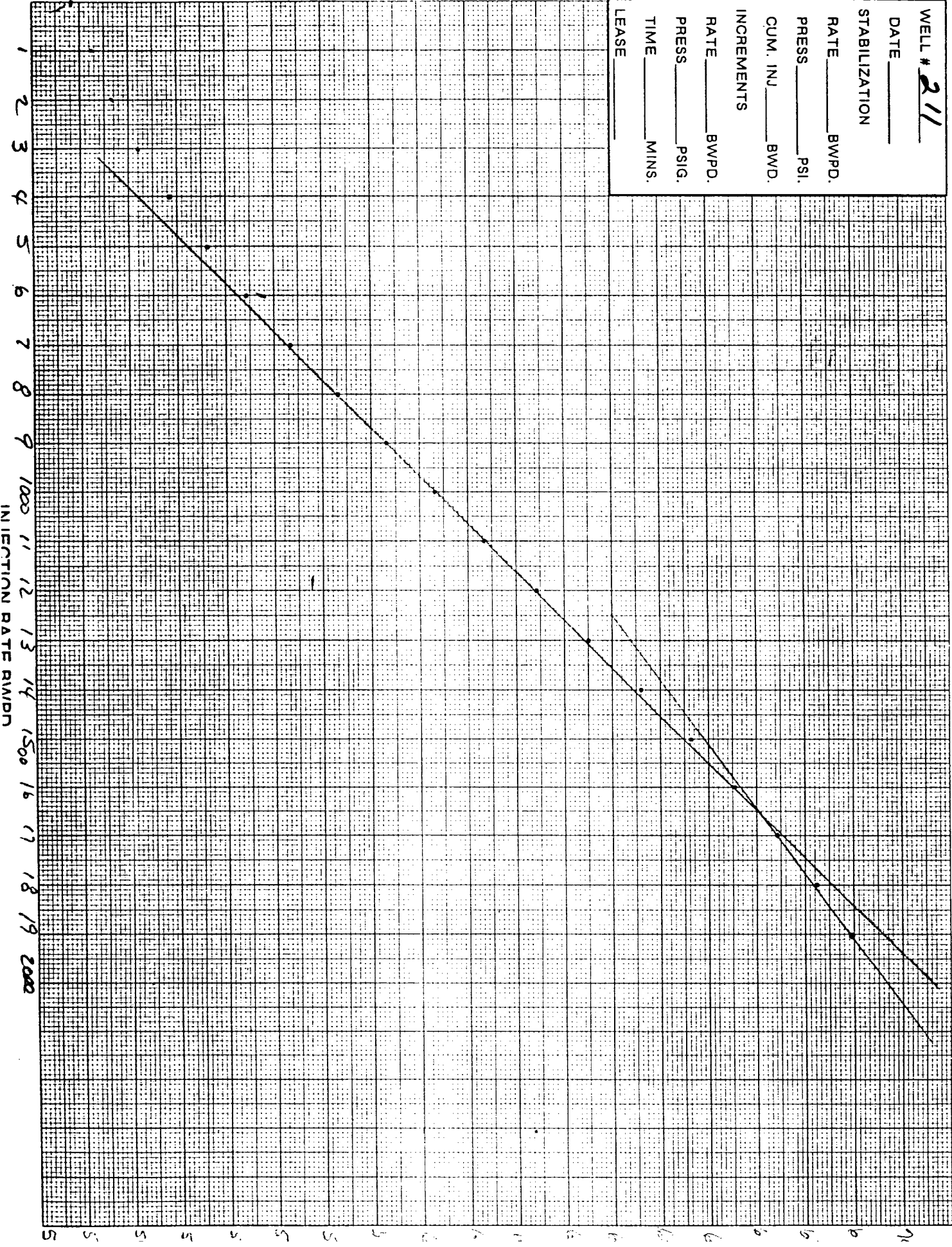
TIME — SEC

INJECTION RATE BWPD

STEP RATE TESTERS INC.

WELL # 211
 DATE _____
 STABILIZATION _____
 RATE _____ BWPD.
 PRESS _____ PSI.
 CUM. INJ _____ BWD.
 INCREMENTS _____
 RATE _____ BWPD.
 PRESS _____ PSIG.
 TIME _____ MINS.
 LEASE _____

BOTTOM HOLE OR SURFACE PRESSURE (PSI)



STEP RATE TESTERS, INC.

915/366-3409

P. O. Box 6414

ODESSA, TEXAS 79762

No. _____

COMPANY Mobil DATE 9-22-86

ADDRESS _____

WELL # 211 LEASE N. Vacuum ABO Unit

WELL FILE DATA:

T.D. _____ PACKERS @ _____ PERFS. _____

TBG. ID. _____ TBG. COATING _____ DEPTH SN. _____ BHP @ 8550'

STABILIZATION:

RATE 0 BHPD PRES. 1585 PSIG. CUMULATIVE _____ BBLS.

INCREMENTS:

RATE 100 BHPD PRES. _____ PSIG. STEP LENGTH 15 MINS.

TEST RESULTS:

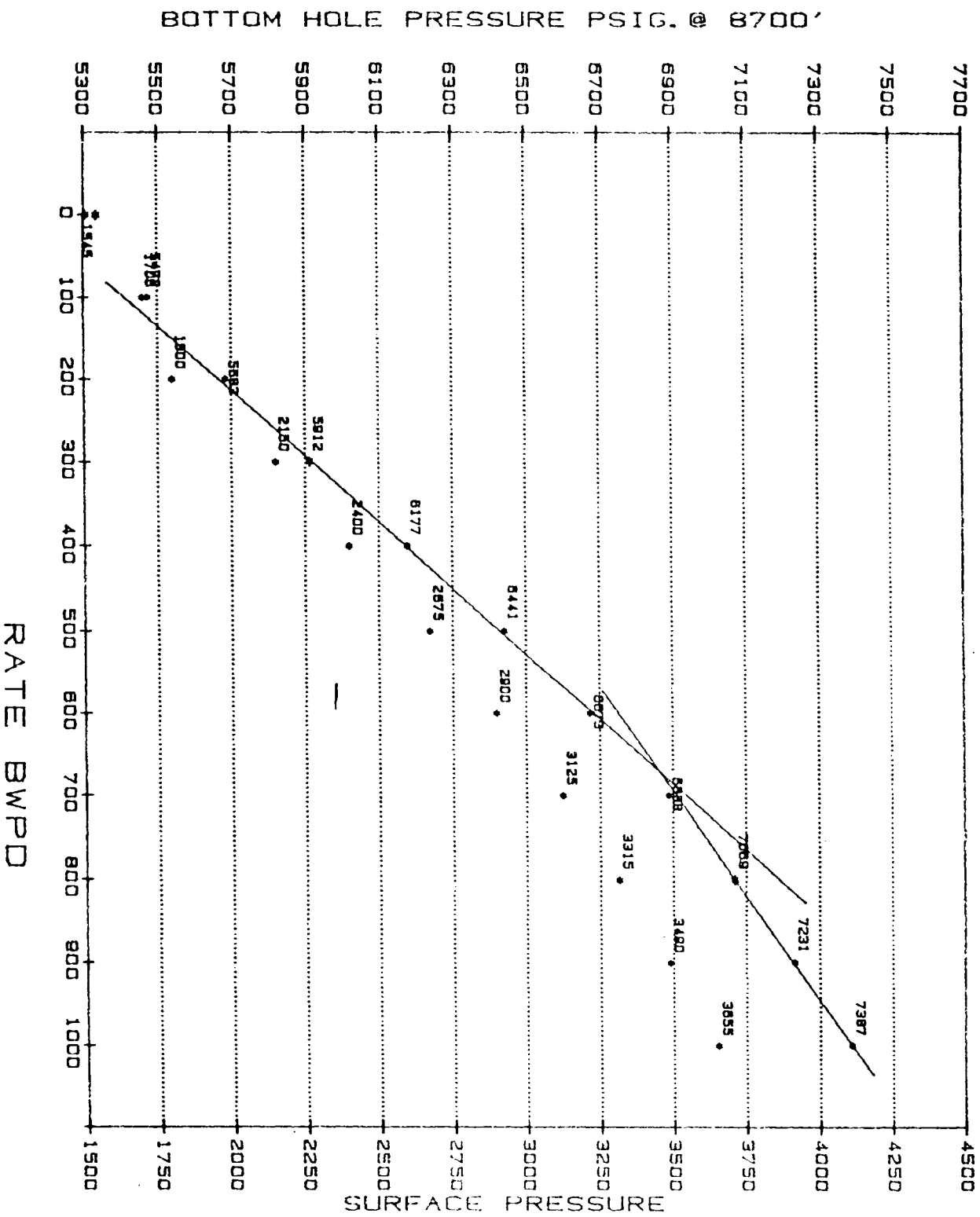
FORMATION PARTING POINT _____ PSIG. @ _____ BHPD

	RATE BHPD	1	PRESSURE SURFACE PSIG.		PRESSURE MINUS FRICTION PSIG.		PRESSURE BOTTOM HOLE PSIG.
1.	0		1585 ⁴		50		5285
2.	100		1630		12 05		5328
3.	200		1680		20		5368
4.	300		1720		35	1	5420 42
5.	400		1790		50		5488 68
6.	500		1860		1:05		5563 75
7.	600		1930		20		5644 81
8.	700		2010		35		5737 93
9.	800		2110		50		5833 96
10.	900		2230		2:05		2932 99
11.	1000		2350		20		6032 100
12.	1100		2470		35	2	6137 105
13.	1200 ^{H2}		2590		50		6244 107
14.	1300 663		2700		3:05		6352 108
15.	1400 714		2810		20		6481 109
16.	1500 765		2920		35		6562 101
17.	1600 816		3030				6657 95
18.	1700 867		3120				6746 89
19.	1800 918		3210			3	6826 80
20.	1900 969		3300				6899

REMARKS _____

TESTER _____ COMPANY REP. _____

NORTH VACUUM ABO UNIT NO. 302 STEP RATE TEST



* BOTTOM
* HOLE
* PRESSURE
* SURF. PSI

TYLER SURVEYS, INC

915/523-6826

908 CARDINAL CREST
ANDREWS, TEXAS 79714

DATE - 10-

~~8888~~ANY - MOBIL PROD. TEX.& N.M. INC.
WELL NUMBER NORTH VACUUM ABO UNIT# 302
BHP# DEPTH - 8700' FT

STABILIZATION

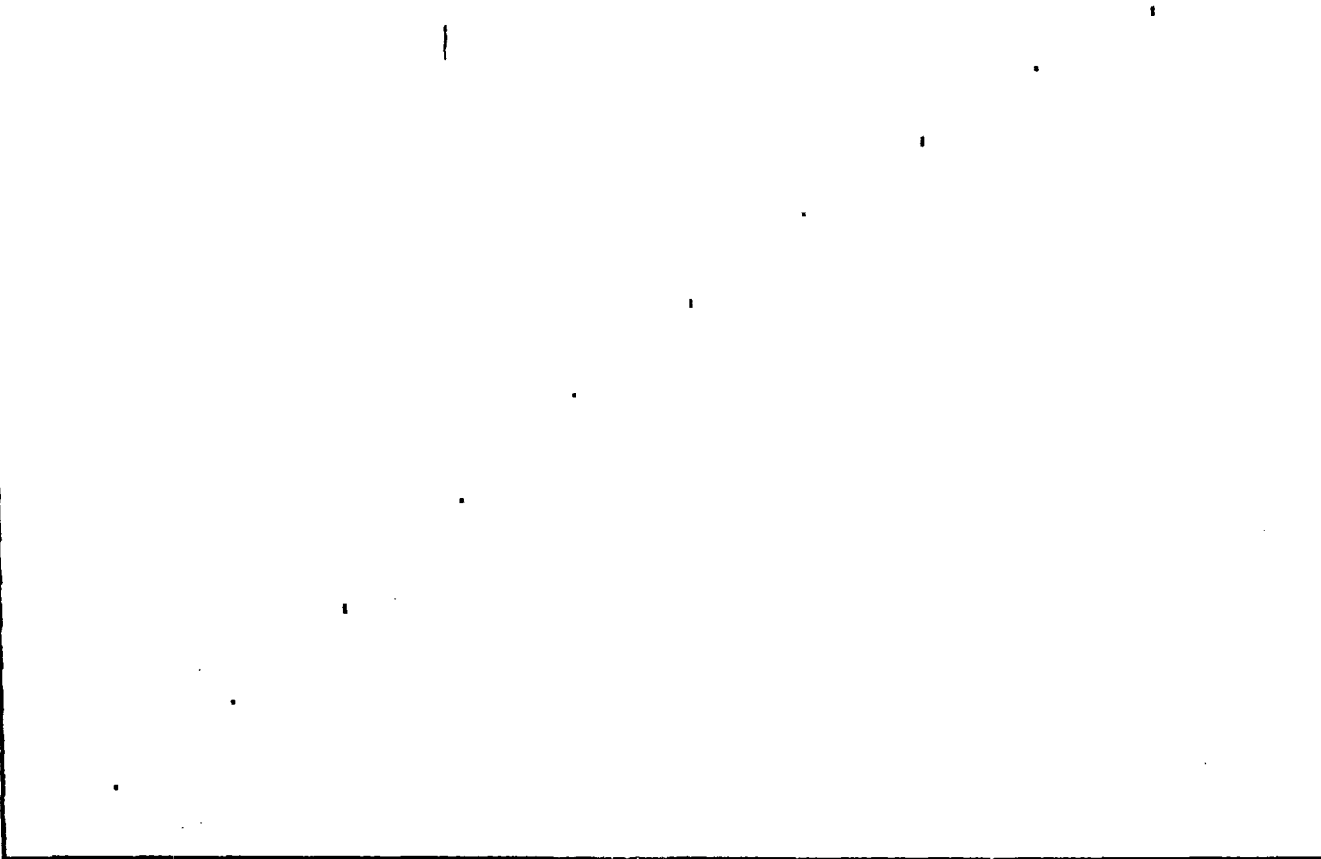
RATE - 0 BWPD PRESURE - 1545 PSIG

INCREMENTS:

RATE - 100 BWPD STEP LENGTH - 15 MIN

TEST RESULTS

FORMATION PARTING POINT - 6866 PSIG @ 672 BWPD
SURFACE STATIC PART. 3108 PSIG



TYLER SURVEYS, INC

915/523-6826 908 CARDINAL CREST
ANDREWS, TEXAS 79714

ACCUMULATED DATA WELL #302

RATE BWPD	BOTTOM HOLE PRESSURE PSIG
0	5303
100	5472
200	5683
300	5912
400	6177
500	6441
600	6673
700	6888
800	7069
900	7231
1000	7387

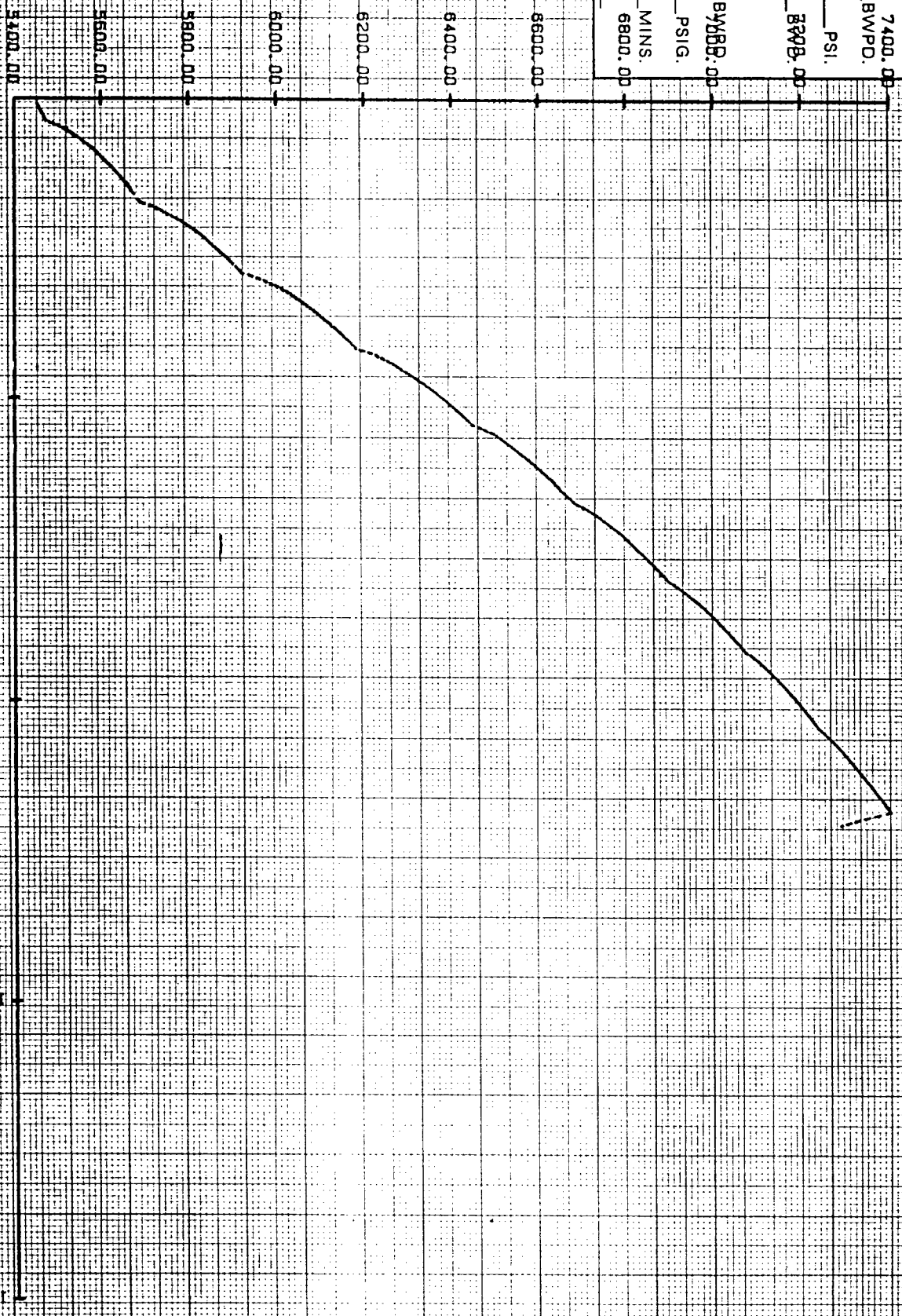
0 , 5798 TO 1100,7547
876.482135 , 7387 TO 58.2646249 , 5303

STEP RATE TESTERS INC.

WELL # 302
 DATE _____
 STABILIZATION _____
 RATE _____ BWPD.
 PRESS _____ PSI.
 CUM. INJ _____ BWPD.
 INCREMENTS _____
 RATE _____ BWPD.
 PRESS _____ PSIG.
 TIME _____ MINS.
 LEASE _____

START TIME: 10:49:17
 GAUGE: 55536

PRESSURE - PSI



BOTTOM HOLE OR SURFACE PRESSURE (PSI)

TIME - SEC

INJECTION RATE BWPD

STEP RATE TESTERS, INC.

915/366-3409

P. O. Box 6414

ODESSA, TEXAS 79762

No. _____

COMPANY Mobil DATE 10-8-86

ADDRESS _____

WELL # 302 LEASE North Vac. ABO Unit

WELL FILE DATA:

T.D. _____ PACKERS @ _____ PERFS. _____

TBG. ID. _____ TBG. COATING _____ DEPTH SN. _____ BHP @ 8700'

STABILIZATION:

RATE _____ BWPD PRES. 1545 PSIG. CUMULATIVE _____ BBLS.

INCREMENTS:

RATE 100 BWPD PRES. _____ PSIG. STEP LENGTH 15 MINS.

TEST RESULTS:

FORMATION PARTING POINT _____ PSIG. @ _____ BWPD

	RATE BWPD	PRESSURE SURFACE PSIG.		PRESSURE MINUS FRICTION PSIG.	PRESSURE BOTTOM HOLE PSIG.
1.	0	1545	40		5303
2.	100	1700	55	169	5472
3.	200	1820	11' 10	211	5683
4.	300	2150	25	239	5912
5.	400	2400	40	265	6177
6.	500	2675	55	264	6441
7.	600	2900	12' 10	232	6673
8.	700	3125	25	215	6888
9.	800	3315	40	181	7069
10.	900	3490	55	162	7231
11.	1000	3655	1' 10	156	7387
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

REMARKS _____

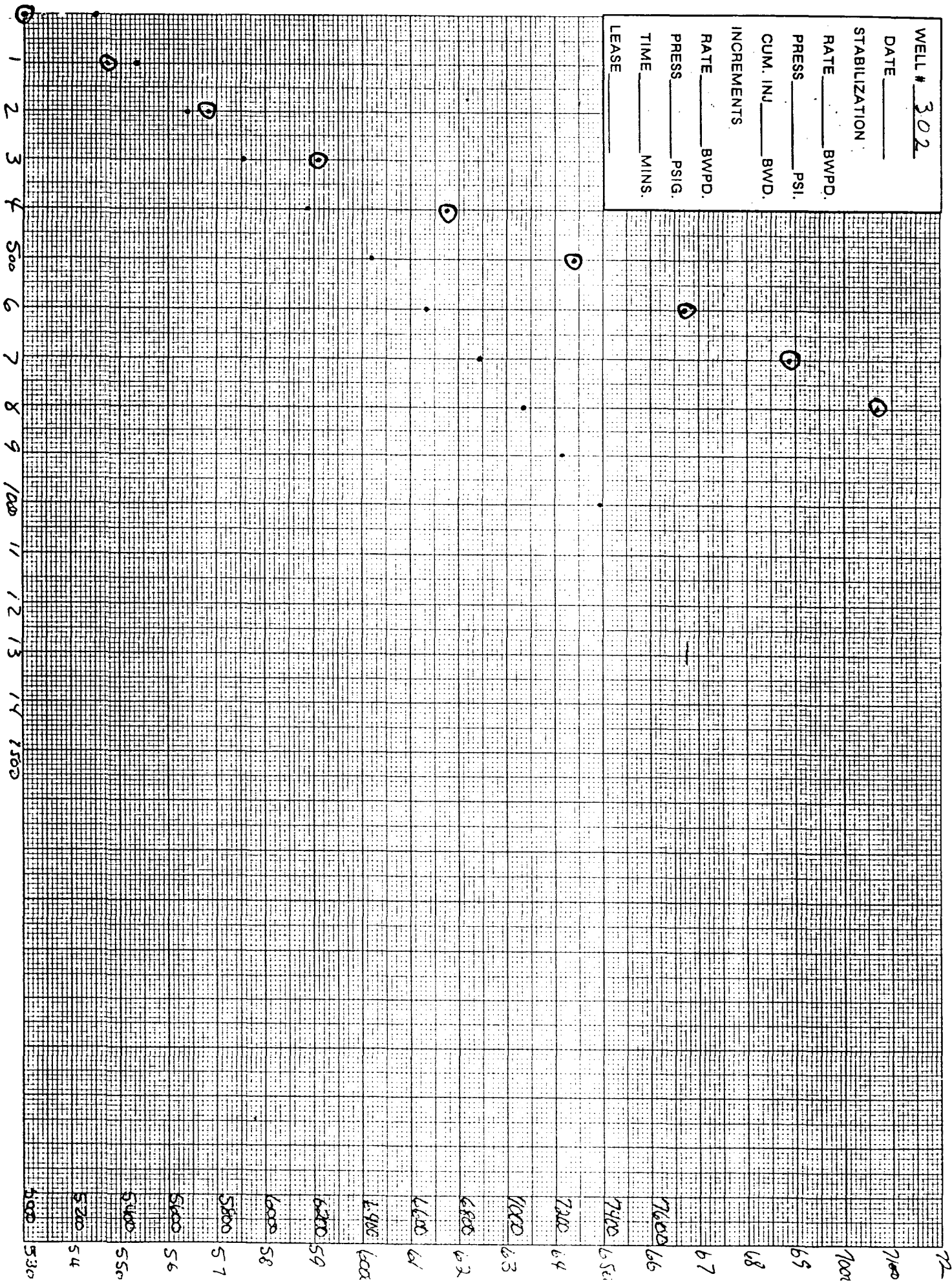
TESTER _____ COMPANY REP. _____

STEP RATE TESTERS INC.

WELL # 302
 DATE _____
 STABILIZATION _____
 RATE _____ BWPD.
 PRESS _____ PSI.
 CUM. INJ _____ BWD.
 INCREMENTS _____
 RATE _____ BWPD.
 PRESS _____ PSIG.
 TIME _____ MINS.
 LEASE _____

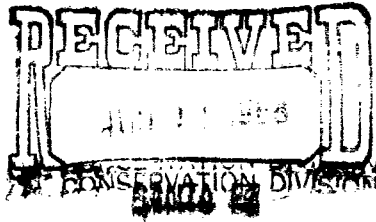
INJECTION RATE BWPD

BOTTOM HOLE OR SURFACE PRESSURE (PSI)



Mobil Producing Texas & New Mexico Inc.

June 23, 1986



P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

PMX-138 File

State of New Mexico
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87051

Attention: R. L. Stamets

7.01
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WATER INJECTION WELLS NO. 98 & 210
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Under the provisions of Order No. PMX-138, dated November 12, 1985, Mobil Producing Texas & New Mexico, Inc. (MPTM) was granted permission to inject water into the Abo formation for the subject wells.

The order limited the pressure on the injection wells to no more than 0.2 psi per foot to the uppermost injection interval in each well. MPTM has completed step-rate tests for these two wells and these tests show that higher pressure will not result in migration of the injected fluid from the Abo formation. MPTM therefore requests an increase in the injection pressure as follows:

	<u>Injection Interval</u>	<u>Max. Surface Inj. Pressure Order PMX-138</u>	<u>Requested Increase in Inj. Pressure</u>
Well No. 98 1980' FSL & 1780' FEL Sec 26, T-17-S, R-34-E	8474-8558'	1695 Psig.	2705 Psig.
Well No. 210 1840' FSL & 800' FWL Sec 23, T-17-S, R-34-E	8539-8609'	1708 Psig.	2770 Psig.

Oil Conservation Division
North Vacuum Abo Unit
Wells No. 98 & 210

-2-

June 23, 1986

A copy of the step rate tests are enclosed.

Yours very truly,

C. C. Smith for

G. E. Tate
Environmental & Regulatory Mgr.

CCSmith/

cc: District Director OCD-Hobbs

TYLER SURVEYS INC.

STEP RATE TEST

NORTH VACUUM ABO UNIT NO. 98

DATE: 6-12-86

MOBIL PRODUCING TEXAS & NEW MEXICO INC.

STABILIZATION: RATE 112 BWPD. PRESSURE 1750 PSIG.

INCREMENTS: RATE 100 BWPD. STEP LENGTH 15 MINS.

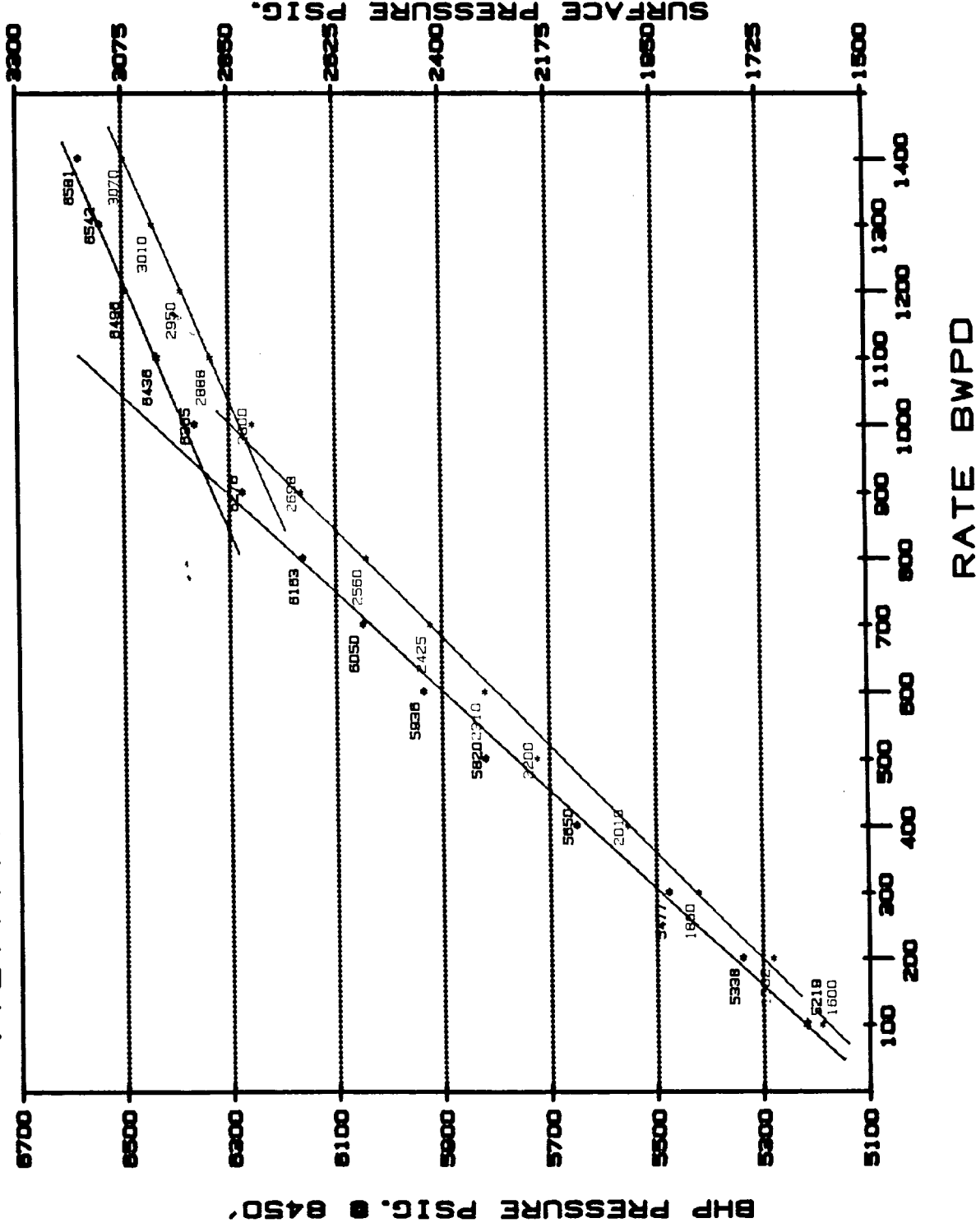
TEST RESULTS:

FORMATION PARTING POINT: BHP. 6345 PSIG. @ 924 BWPD.

SURFACE STATIC PART@ 2705 PSIG., TEST PART@ 2810 PSIG.

TYLER SURVEYS INC. STEP RATE TEST

NORTH VACUUM ABO UNIT NO. 98



TYLER SURVEYS, INC

915/523-6826

908 CARDINAL CREST
ANDREWS, TEXAS 79714

8822436 - MOBIL PRODUCING TEXAS NEW MEX.
WELL NUMBER 98
BHP@ DEPTH - 8450 FT

DATE -

STABILIZATION

RATE - 112 BWPD PRESURE - ~~4298~~ PSIG
1750

INCREMENTS:

RATE - 100 BWPD STEP LENGTH - 15 MIN

TEST RESULTS

FORMATION PARTING POINT - 6345 PSIG @ 924 BWPD
SURFACE STATIC PART. 2705 PSIG



TYLER SURVEYS, INC

915/523-6826 908 CARDINAL CREST
ANDREWS, TEXAS 79714

ACCUMULATED DATA

RATE BWPD	BOTTOM HOLE PRESSURE PSIG
0	4930
100	5219
200	5338
300	5477
400	5640
500	5820
600	5936
700	6050
800	6163
900	6276
1000	6365
1100	6436
1200	6496
1300	6542
1400	6581

0 , 5855.33334 TO 1500,6650.33334
1098.32208 , 6581 TO -117.884185 , 4930

TYLER SURVEYS, INC.

(915) 523-6826 • 908 CARDINAL CREST

ANDREWS, TEXAS 79714

No. _____

COMPANY _____ DATE 6-12-86

ADDRESS _____

WELL NO. 98 LEASE _____

WELL FILE DATA:

T.D. _____ PACKERS @ _____ PERFS. _____

TBG. ID. _____ TBG. COATING _____ DEPTH SN. _____ BHP @ 8450

STABILIZATION:

RATE 112 BHPD PRES. 1750 PSIG. CUMULATIVE _____ BBLS.

INCREMENTS:

RATE 100 BHPD PRES. _____ PSIG. STEP LENGTH 15 MINS.

TEST RESULTS:

FORMATION PARTING POINT 6345 PSIG. @ 424 BHPD

2810

970

	RATE BHPD	PRESSURE SURFACE PSIG.		PRESSURE MINUS FRICTION PSIG.	PRESSURE BOTTOM HOLE PSIG.	
1.	0	1290		55	4930	
2.	100	1600 *		10825	5219	*
3.	200	1702		40	5338	119
4.	300	1840		55	5477	139
5.	400	2010		11.10	5650	173
6.	500	2200 -		25	5820	170 - *
7.	600	2310		40	5936	116
8.	700	2425		55	6050	114
9.	800	2560		12.10	6163	113
10.	900	2698 *		25	6276	113 *
11.	1000	2800 -		40	6365	89 - *
12.	1100	2828 *		55	6436	71 *
13.	1200	2950			6496	60
14.	1300	3070			6542	46 *
15.	1400	3070 *			6581	39 -
16.						
17.						
18.						
19.						
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29.						
30.						

REMARKS _____

TESTER _____ COMPANY REP. _____

DATE 6/12/86

WELL #98

GAUGE SN #65949

POS #1

TIME	PRESSURE	TEMPERATURE	GAUGE
09:54:07	4929.84	117.59*	1
09:55:07	4930.52*	117.59	1
09:56:07	4946.92*	117.59	1
09:57:07	4964.7	117.63*	1
09:58:07	4982.41*	117.63	1
09:59:07	4997.54*	117.63	1
10:00:07	5009.85	117.7*	1
10:01:07	5023.69*	117.7	1
10:02:07	5035.23*	117.7	1
10:03:07	5046.64	117.78*	1
10:04:07	5058.31*	117.78	1
10:05:07	5068.72*	117.78	1
10:06:07	5077.56	117.78*	1
10:07:07	5087.88*	117.78	1
10:08:07	5096.85*	117.78	1
10:09:07	5104.62	117.7*	1
10:10:07	5113.79*	117.7	1
10:11:07	5121.86*	117.7	1
10:12:07	5128.56	117.56*	1
10:13:07	5136.82*	117.56	1
10:14:07	5144.8*	117.56	1
10:15:07	5151.71	117.43*	1
10:16:07	5159.89*	117.43	1
10:17:07	5167.07*	117.43	1
10:18:07	5173.38	117.3*	1
10:19:07	5180.94*	117.3	1
10:20:07	5187.61*	117.3	1
10:21:07	5193.51	117.18*	1
10:22:07	5200.58*	117.18	1
10:23:07	5206.82*	117.18	1
10:24:07	5212.33	117.03*	1
10:25:07	5218.96*	117.03	1
10:26:07	5224.85*	117.03	1
10:27:07	5232.02	116.98*	1
10:28:07	5244.46*	116.98	1
10:29:07	5253.93*	116.98	1
10:30:07	5262.02	116.85*	1
10:31:07	5271.48*	116.85	1
10:32:07	5279.68*	116.85	1
10:33:07	5286.81	116.7*	1
10:34:07	5295.31*	116.7	1
10:35:07	5302.81*	116.7	1
10:36:07	5309.45	116.54*	1
10:37:07	5317.4*	116.54	1
10:38:07	5324.41*	116.54	1
10:39:07	5330.59	116.41*	1
10:40:07	5338.01*	116.41	1
10:41:07	5347.88*	116.41	1
10:42:07	5358.62	116.26*	1
10:43:07	5370.65*	116.26	1

TIME	PRESSURE	TEMPERATURE	GAUGE
10:44:07	5380.35*	116.26	1
10:45:07	5389.31	116.09*	1
10:46:07	5400.55*	116.09	1
10:47:07	5409.88*	116.09	1
10:48:07	5417.9	115.89*	1
10:49:07	5427.43*	115.89	1
10:50:07	5435.88*	115.89	1
10:51:07	5443.31	115.75*	1
10:52:07	5452.25*	115.75	1
10:53:07	5460.57*	115.75	1
10:54:07	5467.86	115.61*	1
10:55:07	5476.59*	115.61	1
10:56:07	5484.32*	115.61	1
10:57:07	5491.15	115.49*	1
10:58:07	5508.25*	115.49	1
10:59:07	5523.89*	115.49	1
11:00:07	5536.76	115.36*	1
11:01:07	5551.63*	115.36	1
11:02:07	5564.38*	115.36	1
11:03:07	5575.3	115.1*	1
11:04:07	5588.07*	115.1	1
11:05:07	5599.06*	115.1	1
11:06:07	5608.73	114.83*	1
11:07:07	5620.24*	114.83	1
11:08:07	5630.23*	114.83	1
11:09:07	5639.31	114.62*	1
11:10:07	5650.16*	114.62	1
11:11:07	5665.1*	114.62	1
11:12:07	5677.97	114.35*	1
11:13:07	5692.81*	114.35	1
11:14:07	5705.6*	114.35	1
11:15:07	5716.69	114.05*	1
11:16:07	5729.77*	114.05	1
11:17:07	5740.79*	114.05	1
11:18:07	5750.18	113.81*	1
11:19:07	5761.5*	113.81	1
11:20:07	5771.37*	113.81	1
11:21:07	5780.06	113.61*	1
11:22:07	5790.52*	113.61	1
11:23:07	5799.77*	113.61	1
11:24:07	5808.78	113.35*	1
11:25:07	5819.55*	113.35	1
11:26:07	5832.34*	113.35	1
11:27:07	5842.73	113.34*	1
11:28:07	5854.57*	113.34	1
11:29:07	5864.87*	113.34	1
11:30:07	5875.02	113.1*	1
11:31:07	5880.71*	113.1	1
11:32:07	5886.37*	113.1	1
11:33:07	5891.62	112.97*	1

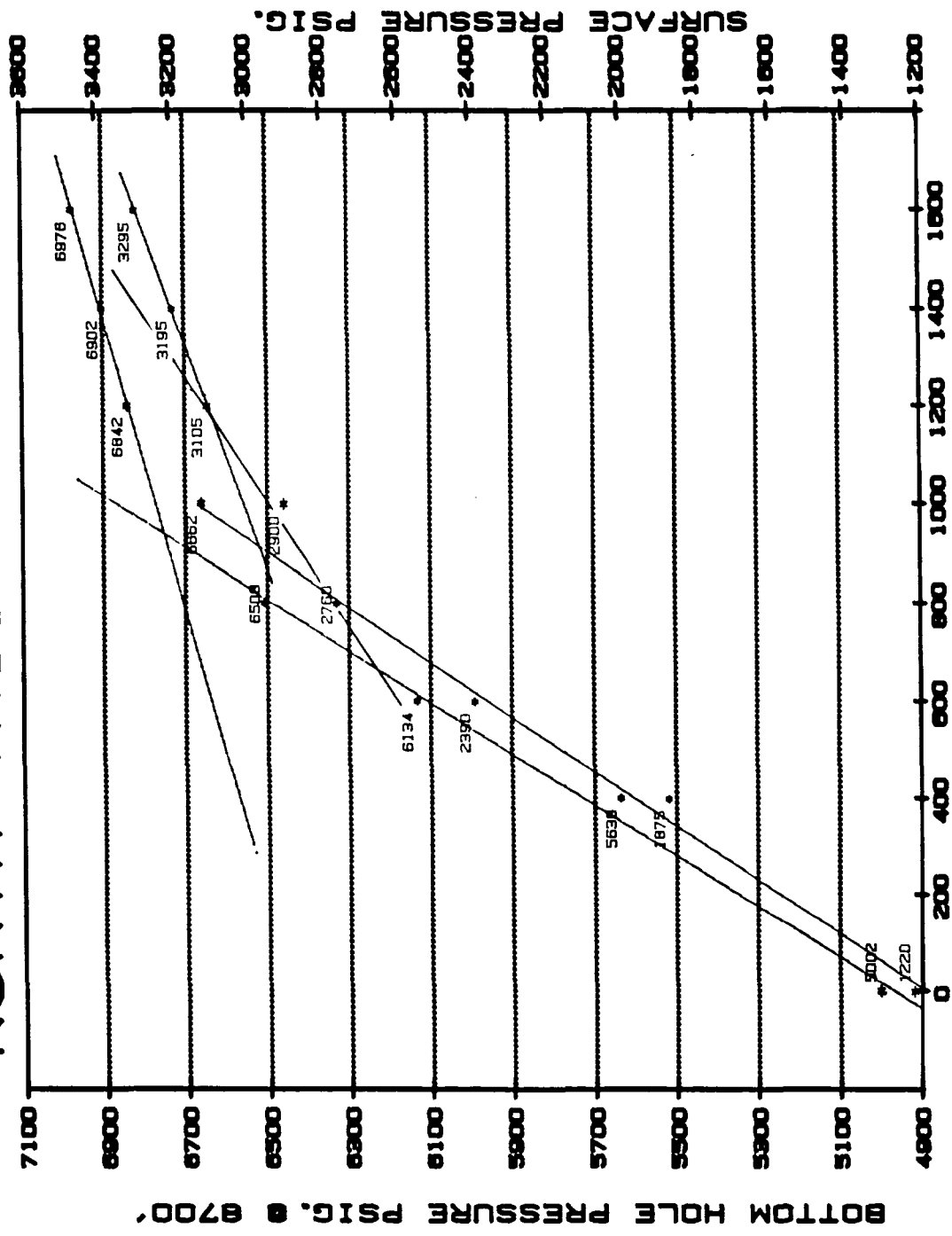
TIME	PRESSURE	TEMPERATURE	GAUGE
11:34:07	5897.98*	112.97	1
11:35:07	5903.95*	112.97	1
11:36:07	5909.4	112.85*	1
11:37:07	5916.06*	112.85	1
11:38:07	5922.91*	112.85	1
11:39:07	5928.77	112.72*	1
11:40:07	5935.71*	112.72	1
11:41:07	5941.92*	112.72	1
11:42:07	5951.44	112.55*	1
11:43:07	5961.77*	112.55	1
11:44:07	5970.12*	112.55	1
11:45:07	5977.33	112.3*	1
11:46:07	5986.15*	112.3	1
11:47:07	5993.96*	112.3	1
11:48:07	6000.77	112.03*	1
11:49:07	6008.89*	112.03	1
11:50:07	6016.02*	112.03	1
11:51:07	6022.27	111.88*	1
11:52:07	6029.79*	111.88	1
11:53:07	6036.64*	111.88	1
11:54:07	6042.69	111.69*	1
11:55:07	6049.93*	111.69	1
11:56:07	6059.18*	111.69	1
11:57:07	6067.54	111.46*	1
11:58:07	6077.21*	111.46	1
11:59:07	6085.77*	111.46	1
12:00:07	6093.17	110.98*	1
12:01:07	6101.54*	110.98	1
12:02:07	6108.99*	110.98	1
12:03:07	6115.52	110.74*	1
12:04:07	6123.42*	110.74	1
12:05:07	6130.49*	110.74	1
12:06:07	6136.92	110.5*	1
12:07:07	6144.49*	110.5	1
12:08:07	6150.73*	110.5	1
12:09:07	6156.38	110.29*	1
12:10:07	6163.35*	110.29	1
12:11:07	6172.56*	110.29	1
12:12:07	6180.46	110.01*	1
12:13:07	6189.61*	110.01	1
12:14:07	6197.72*	110.01	1
12:15:07	6204.99	109.67*	1
12:16:07	6213.61*	109.67	1
12:17:07	6221.03*	109.67	1
12:18:07	6227.52	109.33*	1
12:19:07	6235.54*	109.33	1
12:20:07	6242.55*	109.33	1
12:21:07	6249.06	109.01*	1
12:22:07	6256.72*	109.01	1
12:23:07	6263.36*	109.01	1

TIME	PRESSURE	TEMPERATURE	GAUGE
12:24:07	6269.17	108.72*	1
12:25:07	6276.07*	108.72	1
12:26:07	6283.81*	108.72	1
12:27:07	6290.6	108.32*	1
12:28:07	6298.43*	108.32	1
12:29:07	6305.07*	108.32	1
12:30:07	6310.81	108.07*	1
12:31:07	6317.65*	108.07	1
12:32:07	6323.61*	108.07	1
12:33:07	6328.81	107.76*	1
12:34:07	6335.08*	107.76	1
12:35:07	6340.45*	107.76	1
12:36:07	6344.95	107.46*	1
12:37:07	6350.57*	107.46	1
12:38:07	6355.45*	107.46	1
12:39:07	6359.68	107.25*	1
12:40:07	6364.8*	107.25	1
12:41:07	6370.46*	107.25	1
12:42:07	6375.76	106.97*	1
12:43:07	6381.74*	106.97	1
12:44:07	6386.75*	106.97	1
12:45:07	6391.17	106.66*	1
12:46:07	6396.56*	106.66	1
12:47:07	6401.11*	106.66	1
12:48:07	6405.12	106.33*	1
12:49:07	6410.08*	106.33	1
12:50:07	6414.67*	106.33	1
12:51:07	6418.67	106.03*	1
12:52:07	6423.38*	106.03	1
12:53:07	6427.51*	106.03	1
12:54:07	6431.18	105.75*	1
12:55:07	6435.63*	105.75	1
12:56:07	6440.76*	105.75	1
12:57:07	6445.11	105.42*	1
12:58:07	6450.37*	105.42	1
12:59:07	6454.83*	105.42	1
13:00:07	6458.81	104.86*	1
13:01:07	6463.72*	104.86	1
13:02:07	6467.85*	104.86	1
13:03:07	6471.36	104.64*	1
13:04:07	6475.54*	104.64	1
13:05:07	6479.11*	104.64	1
13:06:07	6482.19	104.37*	1
13:07:07	6485.9*	104.37	1
13:08:07	6489.12*	104.37	1
13:09:07	6491.97	104.08*	1
13:10:07	6495.59*	104.08	1
13:11:07	6499.28*	104.08	1
13:12:07	6502.85	103.76*	1
13:13:07	6506.81*	103.76	1

TIME	PRESSURE	TEMPERATURE	GAUGE
13:14:07	6510.11*	103.76	1
13:15:07	6512.94	103.42*	1
13:16:07	6516.36*	103.42	1
13:17:07	6519.3*	103.42	1
13:18:07	6521.86	103.07*	1
13:19:07	6525.13*	103.07	1
13:20:07	6527.93*	103.07	1
13:21:07	6530.4	102.77*	1
13:22:07	6533.76*	102.77	1
13:23:07	6536.58*	102.77	1
13:24:07	6539.02	102.45*	1
13:25:07	6541.84*	102.45	1
13:26:07	6544.63*	102.45	1
13:27:07	6547.3	102.13*	1
13:28:07	6550.43*	102.13	1
13:29:07	6553.01*	102.13	1
13:30:07	6555.29	101.76*	1
13:31:07	6558.25*	101.76	1
13:32:07	6560.66*	101.76	1
13:33:07	6562.76	101.38*	1
13:34:07	6565.55*	101.38	1
13:35:07	6567.95*	101.38	1
13:36:07	6570.1	101.04*	1
13:37:07	6572.84*	101.04	1
13:38:07	6575.66*	101.04	1
13:39:07	6578.01	100.66*	1
13:40:07	6580.75*	100.66	1
13:41:07	6576.9*	100.66	1
13:42:07	6571.41	101.76*	1
13:43:07	6563.42*	101.76	1

TYLER SURVEYS INC. STEP RATE TEST

NORTH VACUUM ABO UNIT NO. 210
TEST RESULTS:



- * B.H.P. PSIG.
- * PART 6753 PSIG.
- * PART 941 BWP.
- * SURFACE PSIG.
- * PART 2968 PSIG.
2770
- * PART 815 BWP.
820

RATE BWP date 6-3-86
INCREMENTS: 200 bwp. step length 15 min.

TYLER SURVEYS, INC.

(915) 523-6826 • 908 CARDINAL CREST

ANDREWS, TEXAS 79714

No. _____

COMPANY _____ DATE 6-3-86

ADDRESS _____

WELL NO. 210 LEASE North Vacuum ABO Unit

WELL FILE DATA:

T.D. _____ PACKERS @ _____ PERFS. _____

TBG. ID. _____ TBG. COATING _____ DEPTH SN. _____ BHP @ 8700

STABILIZATION:

RATE 137 BHPD PRES. 1950 PSIG. CUMULATIVE _____ BBLS.

INCREMENTS:

RATE 200 BHPD PRES. _____ PSIG. STEP LENGTH 15 MINS.

TEST RESULTS:

FORMATION PARTING POINT _____ PSIG. @ _____ BHPD

	RATE BHPD	PRESSURE SURFACE PSIG.		PRESSURE MINUS FRICTION PSIG.		PRESSURE BOTTOM HOLE PSIG.	
1.	0	1220	10.55			5002	
2.	400	1875	10			5638	
3.	600	2390	25			6134	-196
4.	800	2740	40			6508	374
5.	1000	2900	55			6682	154
6.	1200	3105	12.10			6842	180
7.	1400	3195	25			6902	60
8.	1600	3295	40			6976	
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							
21.							
22.							
23.							
24.							
25.							
26.							
27.							
28.							
29.							
30.							

REMARKS _____

TESTER _____ COMPANY REP _____

NVAU # 210

TIME	PRESSURE	TEMPERATURE	GLUCOSE
10:13:00	5051.92	120.33*	1
10:13:11	5061.23*	120.33	1
10:13:11	5064.18*	120.33	1
10:13:11	5064.31*	120.33	1
10:13:11	5068*	120.33	1
10:13:11	5069*	120.33	1
10:13:11	5069.81*	120.33	1
10:13:11	5070.36*	120.53	1
10:13:11	5054.68*	120.63	1
10:13:11	5044.59*	120.63	1
10:13:11	5034.68*	120.63	1
10:13:11	5033.06*	120.43	1
10:13:11	5011.84*	120.63	1
10:13:11	5012.43*	120.43	1
10:13:11	4999.75*	120.73	1
10:13:11	5001*	120.73	1
10:13:11	5132.14*	120.73	1
10:13:11	5213.53*	120.73	1
10:13:11	5280.97*	120.83	1
10:13:11	5320.38*	120.83	1
10:13:11	5373.04*	120.83	1
10:13:11	5414.5*	120.84	1
10:13:11	5451.81*	120.84	1
10:13:11	5487.47*	120.84	1
10:13:11	5521.23*	121.04	1
10:13:11	5553.25*	121.04	1
10:13:11	5583*	121.04	1
10:13:11	5611.18*	121.04	1
10:13:11	5637.53*	121.04	1
10:13:11	5620.45*	121.04	1
10:13:11	5713.81*	121.04	1
10:13:11	5770.33*	121.07	1
10:13:11	5803.67*	121.07	1
10:13:11	5842.34*	121.07	1
10:13:11	5894.22*	121.07	1
10:13:11	5917.71*	121.07	1
10:13:11	5949.64*	121.07	1
10:13:11	5977.33*	121.07	1
10:13:11	6023.03*	121.07	1
10:13:11	6033.01*	121.07	1
10:13:11	6049.04*	121.07	1
10:13:11	6051.23*	121.07	1
10:13:11	6115.8*	121.07	1
10:13:11	6139.74*	121.07	1
10:13:11	6165.85*	121.07	1
10:13:11	6209.13*	121.07	1
10:13:11	6243.31*	121.07	1
10:13:11	6275.05*	121.07	1
10:13:11	6304.12*	120.81	1
10:13:11	6330.97*	120.84	1

late
Bopd

20

400

TIME	PRESSURE	TEMPERATURE	SALIN
11:32:11	6355.75*	120.74	1
11:33:11	6379.62*	120.63	1
11:34:11	6399.63*	120.43	1
11:35:11	6417.23*	120.43	1
11:36:11	6441.12*	120.14	1
11:37:11	6469.39*	120.14	1
11:38:11	6479.34*	120.14	1
11:39:11	6474.02*	120.14	1
11:40:11-800	6507.99*	119.44	1
11:41:11	6537.39*	119.44	1
11:42:11	6544.35*	119.44	1
11:43:11	6553.53*	119.85	1
11:44:11	6546.28*	119.85	1
11:45:11	6558.66*	119.85	1
11:46:11	6570.13*	119.09	1
11:47:11	6581.92*	119.09	1
11:48:11	6553.15*	119.07	1
11:49:11	6601.72*	119.09	1
11:50:11	6611.72*	117.51	1
11:51:11	6619.25*	117.51	1
11:52:11	6627.77*	117.51	1
11:53:11	6629.58*	116.89	1
11:54:11	6650.42*	116.89	1
11:55:11-1000	6661.13*	116.89	1
11:56:11	6661.11*	116.81	1
11:57:11	6700.16*	116.81	1
11:58:11	6719.16*	116.81	1
11:59:11	6733.7*	116.81	1
12:00:11	6743.0*	115.91	1
12:01:11	6761.54*	117.91	1
12:02:11	6774.1*	115.91	1
12:03:11	6786.11*	115.16	1
12:04:11	6796.64*	115.16	1
12:05:11	6805.63*	115.16	1
12:06:11	6812.29*	114.7	1
12:07:11	6836.71*	114.7	1
12:08:11	6829.37*	114.7	1
12:09:11	6835.15*	114.7	1
12:10:11-1200	6842.04*	114.04	1
12:11:11	6850.11*	114.04	1
12:12:11	6867.36*	114.04	1
12:13:11	6875.7*	113.35	1
12:14:11	6893.13*	113.35	1
12:15:11	6891.31*	113.35	1
12:16:11	6870.32*	113.37	1
12:17:11	6865.89*	113.37	1
12:18:11	6861.01*	112.87	1
12:19:11	6862.46*	112.87	1
12:20:11	6867.26*	112.33	1
12:21:11	6874.38*	112.33	1

TIME	PRESSURE	TEMPERATURE	GAUGE
11:00:00	6981.13*	112.29	1
11:02:00	6988.97*	111.55	1
11:04:00	6994.85*	111.55	1
11:05:00 - 1400	6991.64*	111.55	1
11:06:00	6911.99*	111.01	1
11:07:00	6930.54*	111.01	1
11:08:00	6929.43*	111.01	1
11:09:00	6935.67*	111.01	1
11:10:00	6940.16*	110.5	1
11:11:00	6942.97*	110.5	1
11:12:00	6944.33*	110.5	1
11:13:00	6947.41*	109.99	1
11:14:00	6951.46*	109.99	1
11:15:00	6955.61*	109.99	1
11:16:00	6960.27*	109.44	1
11:17:00	6964.65*	109.44	1
11:18:00	6968.87*	109.44	1
11:19:00	6973.68*	109.44	1
11:20:00 - 1600	6976.46*	109.74	1



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

September 24, 1986

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Mobil Producing Texas &
New Mexico Inc.
P.O. box 633
Midland, Texas 79702

Attn: M. E. Sweeney

Re: Injection Pressure Increase
North Vacuum Abo Unit
North Vacuum Abo Field
Lea County, New Mexico

Dear Sir:

Reference is made to your request of August 28, 1986 to increase the surface injection pressure on three wells within your North Vacuum Abo Unit. This request is based on step rate tests conducted on the wells during August, 1986. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase your surface injection pressure on the following wells:

<u>Well & Location</u>	<u>Maximum Injection Surface Pressure</u>
N. Vacuum Abo Unit No. 112 660 FNL & 860 FWL (Unit D) Section 25,	3260 PSIG
N. Vacuum Abo Unit No. 129 860 FNL & 1980 FEL (Unit B) Section 23,	3166 PSIG
N. Vacuum Abo Unit No. 204 660 FNL & 860 FWL (Unit D) Section 24	2833 PSIG

All in Township 17 South, Range 34 East, Lea County.

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or it is endangering any fresh water aquifers.

Sincerely,

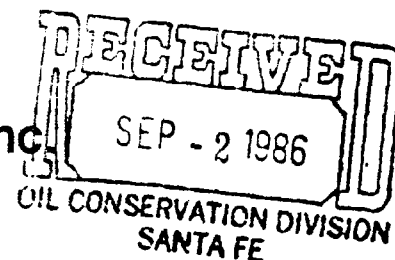
A handwritten signature in dark ink, appearing to read "R. L. Stamets", with a large, stylized flourish at the end.

R. L. STAMETS
Director

RLS/DRC/et

cc: Oil Conservation Division - Hobbs
PMX - 138
WFX - 557
Donna McDonald
D. Catanach

Mobil Producing Texas & New Mexico Inc.



August 28, 1986

P.O. BOX 633
MIDLAND, TEXAS 79702

State of New Mexico
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87051

Attention: R. L. Stamets

7.01
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WATER INJECTION WELLS NO. 112, 129
AND 204
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Under the provisions of Order No. PMX-138, dated November 12, 1985 and WFX-557, dated February 11, 1986, Mobil Producing Texas & New Mexico, Inc. (MPTM) was granted permission to inject water into the Abo formation for the subject wells.

The order limited the pressure on the injection wells to no more than 0.2 psi per foot to the uppermost injection interval in each well. MPTM has completed step-rate tests for these three wells and these tests show that higher pressure will not result in migration of the injected fluid from the Abo formation. MPTM therefore requests an increase in the injection pressure as follows:

	<u>Injection Interval</u>	<u>Present Surface Inj. Pressure Limit</u>	<u>Requested Surface Inj. Pressure Limit</u>
Well No. 112 660' FNL & 860' FWL Sec 25, T-17-S, R-34-E Order No. PMX-138	8392-8433'	1678 Psig.	3260 Psig.
Well No. 129 860' FNL & 1980' FEL Sec 23, T-17-S, R-34-E Order No. WFX-557	8499-8558'	1700 Psig.	3166 Psig.

Oil Conservation Division
North Vacuum Abo Unit
Wells No. 112, 129 & 204

-2-

August 28, 1986

	<u>Injection Interval</u>	<u>Present Surface Inj. Pressure Limit</u>	<u>Requested Surface Inj. Pressure Limit</u>
Well No. 204 660' FNL & 860' FWL Sec 24, T-17-S, R-34-E Order No. WFX-557	8487-8537'	1697 Psig.	2833 Psig.

Enclosed are copies of the step rate tests.

Yours very truly,



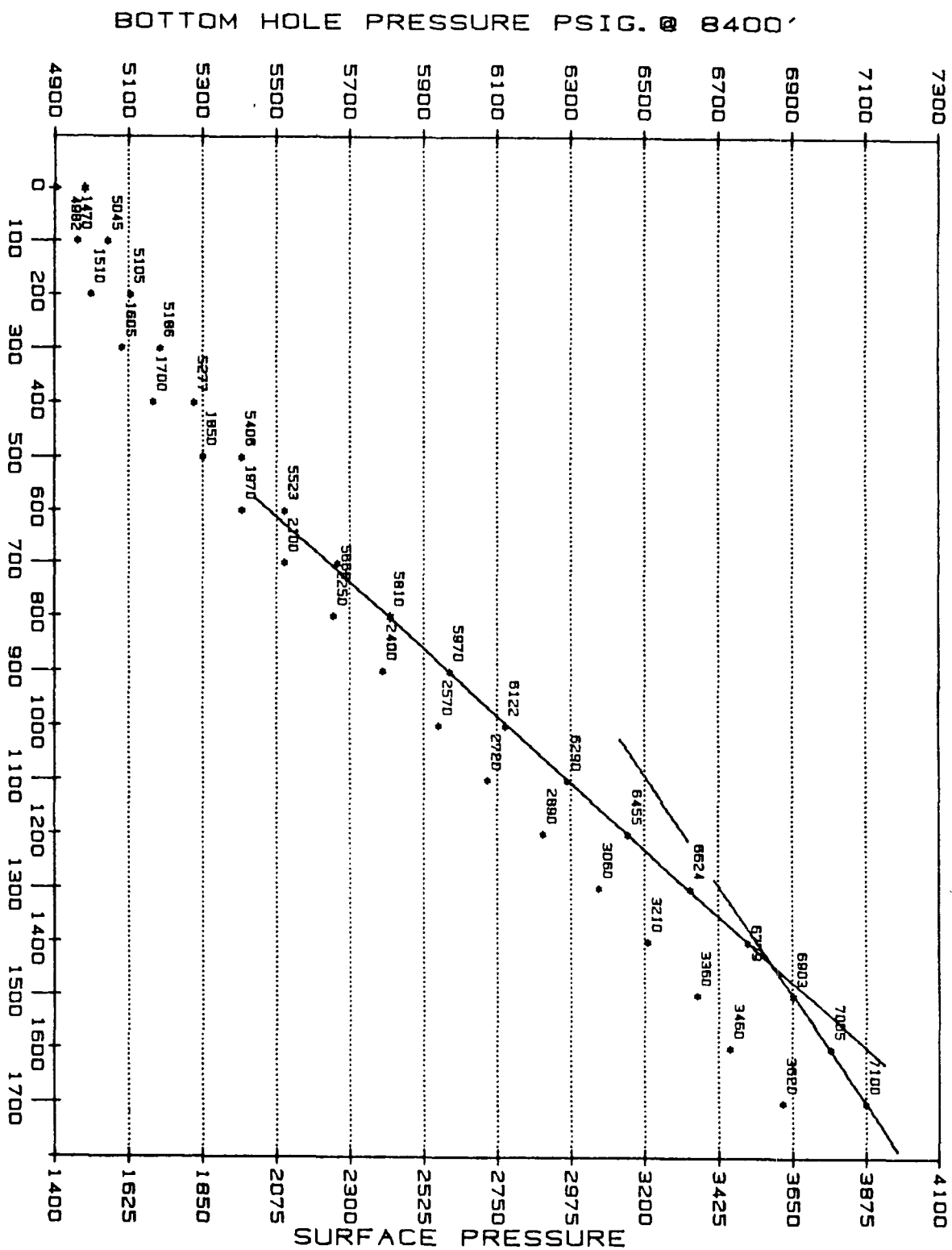
M. E. Sweeney
Environmental & Regulatory Mgr.

CCSmith/

Attachments

cc: District Director OCD-Hobbs

NORTH VACUUM ABO UNIT NO. 112 STEP RATE TEST



* BOTTOM
* HOLE
* PRESSURE
* SURFACE

TYLER SURVEYS, INC

915/523-6826

908 CARDINAL CREST

ANDREWS, TEXAS 79714

ACCUMULATED DATA

WELL #112

RATE BWPD	BOTTOM HOLE PRESSURE PSIG
--------------	------------------------------

0	4982
100	5045
200	5105
300	5186
400	5277
500	5406
600	5523
700	5666
800	5810
900	5970
1000	6122
1100	6290
1200	6455
1300	6624
1400	6779
1500	6903
1600	7005
1700	7100

0 , 5426.66667 TO 1800,7199.66667

1594.94985 , 7100 TO 298.063914 , 4982

TYLER SURVEYS, INC

915/523-6826

908 CARDINAL CREST
ANDREWS, TEXAS 79714

COMPANY - MOBIL PRODUCING TEXAS N.M.
WELL NUMBER 112
BHP₂ DEPTH - 8400 FT

DATE - 8-1

STABILIZATION
RATE - 0 BWPD PRESURE - 1400 PSIG

INCREMENTS:
RATE - 100 BWPD STEP LENGTH - 15 MIN

TEST RESULTS
FORMATION PARTING POINT - 6842 PSIG @ 1437 BWPD
SURFACE STATIC PART. 3260 PSIG

